Response to Pre-Bid Queries

NAME OF PROJECT : DESIGN, ENGINEERING, CONSTRUCTION AND COMMISSIONING OF WASTEWATER TREATMENT PLANTS WITH TERTIARY TREATMENT FACILITY, AND INTERMEDIATE SEWAGE PUMPING STATION ALONG WITH OPERATION & MAINTENANCE THEREOF FOR TEN YEARS [WORKS - A] AND PROCUREMENT AND CONSTRUCTION OF RISING MAIN, MAIN SEWERS AND LATERALS INCLUDING MACHINE HOLES AND LIFT SEWAGE PUMPING STATIONS [WORKS – B] HYBRID MODE FOR BOMMANAHALLI ZONE IN 110 VILLAGE AREAS (Phase II) UNDER KARNATAKA WATER SECURITY AND DISASTER RESILIENCE PROGRAM (KWSDRP) – (Contract Package No. BWSSB CE-P/KWSDRP/WBS-IV)

Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
1		3.1.1 General Construction Experience: The Tenderers shall provide evidence that (a) it has been actively engaged in the civil works construction business for at least the last five years prior to the date of submission of applications, in the role of prime contractor, management contractor, partner in a joint venture, and (b) The Tenderer must have generated minimum average annual turnover of Rs. Rs.169.87 crores in any two financial years calculated as total certified payments received for contracts in progress or completed, within the last 5 financial years. The average annual turnover is defined as the total of certified payment certificates for works in progress or completed by the firm or firms comprising the Tenderers, divided by the number of years.	3.1.1 General Construction Experience: The Tenderers shall provide evidence that (a) it has been actively engaged in the civil works construction business for at least the last five years prior to the date of submission of applications, in the role of prime contractor, management contractor, partner in a joint venture, and (b) The Tenderer must have generated minimum average annual turnover of Rs. Rs.169.87Croresin any two financial years calculated as total certified payments received for contracts in progress or completed, within the last 10 financial years. The average annual turnover is defined as the total of certified payment certificates forworks in progress or completed by the firm or firms comprising the Tenderers, divided by the number of years.	Not Acceptable. Tender Conditions Prevails.
2		3(a) (i) Contracts of Similar Size and Nature: The tenderer as sole entity or lead partner and or partner in a joint venture shall provide evidence that it has successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of One (1) No. WwTP contract of value not less thanRs.71.63 Croresin last Five (5) financial years. (ii) The Tenderer as sole entity or lead partner and or partner in a joint venture shall provide evidence that it has successfully completed procurement, execution and commissioning of Underground Sewerage network for the Contract Value not less than Rs.8.00 Croresin last Five (5) financial years.	3(a) (i) Contracts of Similar Size and Nature: The tenderer as sole entity or lead partner and or partner in a joint venture shall provide evidence that it has successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of One (1) No. WwTP contract of value not less thanRs.71.63 Croresin **last Ten (10) financial years.** (ii) The Tenderer as sole entity or lead partner and or partner in a joint venture shall provide evidence that it has successfully completed procurement, execution and commissioning of Underground Sewerage network for the Contract Value not less than Rs.8.00 Croresin last Ten (10) financial years.	Not Acceptable. Tender Conditions Prevails.
3		(b) Experience in Key Activities: The Tenderers shall provide evidence that it has a minimum experience in the following key activities, (i) Experience in Execution of STPs The tenderer as a sole entity or a Lead Partner and or Partner in a Joint Venture shall have successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of minimum One (1) No. WwTP of 34 MLD capacity and above or Two (2) Nos. of Waste water Treatment Plants of minimum 17 MLD capacity with Biological Nutrient Removal (BNR) technology of process like , A2O, EA, IFAS, MBBR, SBR, with SCADA Integration, to meet effluent standard as BOD ≤ 10 mg/L, COD ≤ 50 mg/L, TSS ≤ 10 mg/L, TN ≤ 10 mg/L, TP ≤ 1 mg/L and fecal coliform<100MPN/100ml and should be in operation for a period of one year during the last **5 years** as on date of Bid submission.	(b) Experience in Key Activities: The Tenderers shall provide evidence that it has a minimum experience in the following key activities,(i) Experience in Execution of STPs. The tenderer as a sole entity or a Lead Partner and or Partner in a Joint Venture shall have successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of minimum One (1) No. WwTP of 34 MLD capacity and above or Two (2) Nos. of Waste water Treatment Plants of minimum 17 MLD capacity with Biological Nutrient Removal (BNR) technology of process like , A2O, EA, IFAS, MBBR, SBR, with SCADA Integration, to meet effluent standard as BOD ≤ 10 mg/L, COD ≤ 50 mg/L, TSS ≤ 10 mg/L, TN ≤ 10 mg/L, TP ≤ 1 mg/L and fecal coliform<100MPN/100ml and should be in operation for a period of one year during the last **10 years** as on date of Bid submission.	Not Acceptable. Tender Conditions Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
4		(ii) Construction Experience- Reuse Plant (with Tertiary Level) (ii) Construction Experience- Reuse Plant (with Tertiary Level) The tenderer as sole entity or lead partner and or partner in a joint venture shall provide evidence that it has successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of minimum One (1) No. and above reuse plant of 12 MLD or Two (2) Nos. of reuse plant (with Tertiary Treatment) of minimum 6 MLD capacity and should be in operation for a period of one year during the last 5 years as on date of Bid submission. The Reuse Plant (with Tertiary Treatment) have to meet following criteria for the treated effluent Parameter Unit Specified Maximum Concentration Turbidity NTU < 2.0 TDS mg/L < 1000 TN mg/L < 5.0 BOD mg/L < 5.0 COD mg/L < 30.0 TP mg/L < 1.0	(ii) Construction Experience- Reuse Plant (with Tertiary Level) (ii) Construction Experience- Reuse Plant (with Tertiary Level) The tenderer as sole entity or lead partner and or partner in a joint venture shall provide evidence that it has successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of minimum One (1) No. and above reuse plant of 12 MLD or Two (2) Nos. of reuse plant (with Tertiary Treatment) of minimum 6 MLD capacity and should be in operation for a period of one year during the last 10 years as on date of Bid submission. The Reuse Plant (with Tertiary Treatment) have to meet following criteria for the treated effluent Parameter Unit Specified Maximum Concentration Turbidity NTU < 2.0 TDS mg/L < 1000 TN mg/L < 5.0 BOD mg/L < 5.0 COD mg/L < 30.0 TP mg/L < 1.0	Not Acceptable. Tender Conditions Prevails.
5		Note: 1. Tenderer must submit the MOU with Technology provider for proposed process technology (SBR/IFAS/MBBR) under this contract, failing which the Tender will be considered as technically non-responsive. 2. Technology provider shall provide the evidence that he has successfully supplied the technology for at least 1 (One) STP same as 3.1.2 (b)(i)	If technology provider has executed projects on similar technology as well as capacity as called for in the NIT, can this be considered as technical prequalification for the cited tender.	Tender Conditions Prevails
6		Retention Amount- The retention amount at 5% of each RA bills will be deducted. 50% of retention amount will be released after successful completion, commissioning and handing over plant. Balance 50% will be released after completion of Defects Liability Period (DLP). This balance 50% may also be released on submission of equivalent amount of BG at the discretion of Employer.	After standard deduction a further retention of 5% on every RA bill will greatly affect cash flows. Hence, kindly reconsider.	Not Acceptable. Tender Conditions Prevails.
7	Volume-2/ Section-7, Part5 -32	Influent wastewater Characteristics pH — 6.5-7.5 BOD mg/L 350 COD mg/L 800 TSS mg/L 450 VSS mg/L 360 TKN mg/L 70 NH4-N mg/L 45 Total Phosphorus mg/L 7	As per the clause referenced in the tender document, the BOD value of 350mg/L corresponds to a COD of800mg/L, which indicates a relatively high COD/BOD ratio. Typically, as per CPHEEO guidelines, a BOD of 250mg/L with a COD of 425 mg/L is considered standard. We assume that the sewage does not contain any industrial effluent and that the COD is primarily biodegradable. Kindly confirm	The design influent parameters requirement shall be as defined Part 5, Volume 2 / Section 7. "TSPS & WwTPs Design / Sizing Criteria".
8	Volume-2/ Section-7, Part5 -32	Influent Wastewater Characteristics COD mg/L 800	We presume that there is no ingress of industrial effluent in the sewage, and that more than95% of the COD is biodegradable, with less than 5% being non-biodegradable. Alternatively, the treated effluent COD performance requirements may be considered for relaxation, provided the Contractor can demonstrate that a portion of the influent COD isnon-biodegradable and cannot be removed using the existing treatment processes at the Works. Kindly confirm.	Bidder may consider Non-biodegradable COD as per the bidder design.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
9	Volume-1/Page 15 of 236	Construction Experience-Pipeline The tenderer must have experience in the role of Prime Contractor(Single Entity or JV member)/Management Contractor for procurement and construction of pipeline (DWC/RCC/DI) with a minimum diameter of 200mm & above in any one year during the last 5 years as on date of bid submission involving minimum length of 12 Km.	We would like to bring to your attention that only a limited number of bidders are currently able to qualify under the existing criteria. The specific requirements, particularly regarding the construction experience, are preventing several competent bidders from meeting the overall qualification standards. As per the CPHEEO and prevailing in all states, uPVC pipes are being used up to 250 mm diameter. DWC pipes and CI Pipes are being used beyond 250 mm diameter in sewer networks. Hence, we request you to consider uPVC and CI experience also in addition to DWC/RCC/DI construction of pipeline. Please confirm.	For experience purpose CI pipeline construction will also be considered. Refer Addendum-1.
10	Volume-1/Page 15 of 236	(vi)Construction Experience Trenchless Works The tenderer must have experience in the role of Prime Contractor (Single entity or JV member)/Management Contractor for executing trenchless work 600mm dia and above MS casing pipe of minimum 100 meters in one year during the last 5 years as on date of bid submission.	We would like to bring to your attention that only a limited number of bidders are currently able to qualify under the existing criteria. The specific requirements, particularly regarding the construction experience, are preventing several competent bidders from meeting the overall qualification standards. In light of this, we respectfully request that you consider permitting bidders to submit a Memorandum of Understanding (MoU) with a specialist subcontractor who meets the required qualifications. We believe this approach would promote fair competition and enable capable teams to participate more effectively. Kindly confirm.	Not Acceptable. Tender Conditions Prevails.
11	Volume-1/Page 16 of 234	Technology provider shall provide the evidence that he has successfully supplied the technology for at least 1 (One) WWTP same as 3.1.2 (b)(i) 3.1.2.(b)(i)Experience in Execution of WwTPs The tenderer as a sole entity or a Lead Partner and or Partner in a Joint Ventureshallhavesuccessfullycompleted,includingDesign,Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of minimum One(1)No. WwTP of 34 MLD capacity and above or Two (2) Nos. of Waste Water Treatment Plants of minimum17MLD capacity with Biological Nutrient Removal (BNR) technology of process like,A2O, EA, IFAS, MBBR, SBR, with SCADA Integration, to meet effluent standard as BOD ≤ 10 mg/L, COD ≤ 50 mg/L, TSS ≤ 10 mg/L, TN ≤ 10 mg/L, TP ≤ 1 mg/L and fecal MPN/100ml and should be in operation for a period of one year during the last 5 years as on date of Bid submission.	As per the Tender document, the Technology Provider is required to demonstrate that they have successfully supplied the specified technology for at least one Wastewater Treatment Plant (WWTP), as outlined in clause 3.1.2 (b)(i). We understand that this clause refers to the effluent quality at the final discharge point of the Sewage Treatment Plant(STP), rather than immediately following the secondary treatment stage. Accordingly, to demonstrate compliance, the Technology Provider for the secondary treatment system must ensure that the final treated effluent meets the following parameters, as specified—excluding fecal coliform: •BOD≤ 10mg/L •COD≤ 50mg/L •TSS≤ 10mg/L •Total Nitrogen(TN)≤10mg/L •Total Phosphorus(TP)≤1mg/L	Refer Addendum-1
12	Volume-1/Page 14 of 236	Technology provider shall provide the evidence that he has successfully supplied the technology for at least 1 (One) WWTP same as 3.1.2 (b)(i)	As per the Tender document, the Technology Provider must submit evidence of having successfully supplied the technology for at least one (1) wastewater treatment plant (WWTP), in accordance with Clause 3.1.2(b)(i). We observe that the clause does not clearly specify the required capacity of the reference WWTP. However, it is our understanding that the Technology Provider is expected to demonstrate experience in supplying the technology for at least one(1) WWTPo 34MLD capacity, as per the intent of Clause 3.1.2(b)(i). Kindly confirm.	Refer Addendum-1
13	Volume-2/ Section-7, Part5 -58	N-1condition:-The Bidder shall provide calculations for operating the WwTP at Design Flow with 1 SBR tank offline for maintenance.	In the earlier BWSSB tender—specifically the CP25 package and the 10 MLD STP at Jakkur, which adopted SBR technology—this particular clause was omitted. We presume that a similar approach will be adopted for the current tender as well. Kindly confirm.	Tender Conditions Prevails.

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14	Volume-2/ Section-7, Part5 -59	HRTataverageflow:24Hrs.	Hydraulic Retention Time(HRT)is a derived parameter based on the selected SBR cycle time and the inlet sewage characteristics. We understand that the HRT should be determined in accordance with the process requirements and the Technology Provider's recommendations to meet the effluent quality standards specified in the tender. Kindly confirm.	Tender Conditions Prevails.
15	Volume-2/ Section-7, Part5 -60	Maximum Decanter Weir loading rate: 120 m3/h/m	IntheearlierBWSSBtendersforCP25,CP26,andCP27 packages based on SBR technology, the maximum decanter weir loading rate was specified as 125 $m^3/h/m$ (Addendum-8). We assume that this same rate will be applicable to the current tender as well. Kindly confirm.	Tender Conditions Prevails.
16	Volume-2/ Section-7, Part8 -98	Decanters(For SBR system)	We assume that all decanter specifications will be acceptable based on the technology provider's standard specifications, as the bidder is required to submit the technology tie-up agreement in the technical bid. Kindly confirm.	Tenderer or Technology supplier can adopt with his own Patent concept of Decanter Equipment, but has to justify such thickness adopted for the steel member with suitable Structural Analysis Report for the fabricated Steel Structure of Decanter Mechanism.
17	Volume-2/ Section-7, Part8 -98	Decanters(For SBR system) All the withdrawal SS 316L Pipes shall be of thickness not less than Schedule 20S above 200 mm and Schedule below 200 mm shall be of Schedule 40S, and all the pipes shall be of Seamless type only.	It is presumed that the decanter mechanism forms an integral part of the technology components. Additionally, the bidders required to submit the Technology Tie-Up Agreement as part of the technical bid. Accordingly, the pipe schedule(s) mentioned under the decanter specifications shall not be applicable to the decanter system. Kindly confirm.	Tenderer or Technology supplier can adopt with his own Patent concept of Decanter Equipment, but has to justify such thickness adopted for the steel member with suitable Structural Analysis Report for the fabricated Steel Structure of Decanter Mechanism.
18	Volume-2/ Section-7, Part5 -62	8.ProcessAirBlowers α:Oxygen Transfer Correction Factor - 0.6 β:Salinity-SurfaceTensionCorrectionFactor-0.95 F: Fouling Factor - 0.8	The factors provided in the tender document—Alpha,Beta,and the Fouling Factor—are dependent on the type of diffuser, material of construction (MoC), and self-cleaning capacity, which can vary within the range specified in the latest edition of Metcalf and Eddy. Therefore, we assume that these factors can be considered in accordance with the latest edition of Metcalf and Eddy for designing the aeration system. Kindly confirm.	Tender Conditions Prevails.
19	Volume-2/ Section-7, Part8-82toPart 8-85 Volume-2/ Section-7, Part8-100toPart 8-101	Aeration system with allied Equipments Tubular Type Diffusers & 8.18.15.2 Diffuser system for IFAS 8.18.15.3 Type of Diffuser System	The Tender document specifies two different diffuser specifications as outlined in the referenced clause. We understand that the diffuser specifications provided in Clause 8.18.15.2 to 8.18.15.6 are applicable to the aeration system for all secondary treatment processes where diffused aeration is used. Kindly confirm.	Diffuser specification shall be as per Cl.no.8.18.1 only and Cl.no. 8.18.15.2 to 8.18.15.6 stands deleted Refer Addendum-1
20	Volume-2/ Section-7, Part8-90	Sl.no. | Description | Material of Construction f | Acoustic enclosure | Al-Zn coated steel, I nsulated With glass wool	Recently, various materials of construction (MOC) for acoustic enclosures for turbo air blowers have become available. We kindly request permission for the tenderer to provide an acoustic enclosure for the turbo blower based on the manufacturer's standard MOC. Kindly confirm.	Superior material than specified in the tender can be adopted with justification and without any cost implication to BWSSB.

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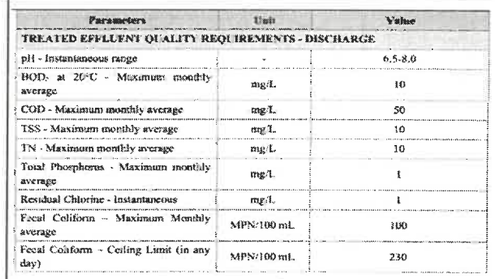
Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
21	Volume-2/ Section-7, Part8-161	40DiscFiltrationSystem List of Approved Suppliers: Manufacturer for Disc Filter: M/s Hydro Tech M/s Xylem M/s Estragua M/s JashInvent M/s Huber M/s AquaAerobics M/s Evoquawater Technologies	M/s Yucheon has been accepted as a disc filter supplier in several previous BWSSB tenders, including the STP packages of CP- 25, 26 and 27, 10 MLD STP at Jakkur, 10Komaghatta, 13 MLD ByrathiKanne. Therefore, we assume that the tenderer can propose M/s. Yucheon Fiber Disc Filter for this tender. Kindly confirm.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
22	Volume-2/ Section-7, Part5 -65	DISCFILTER Designflowperunit:Designedfor100%PeakFlowsincludingrecycle flows - Irrespective process	We understand that the design flow for the disc filter unit should be based on the maximum in coming flow to the unit. In the case of the SBR system, the FDF unit should be designed based on the average flow or the decant flow, whichever is higher. Kindly confirm.	Tender Conditions Prevails.
23	Volume-2/ Section-7, Part1-11 Volume-2/ Section-7, Part5-32	 **Parameters** / **Unit** / **Value** TREATED EFFLUENT QUALITY REQUIREMENTS - DISCHARGE pH - Instantaneous range - 6.5-8.0 BOD$_3$ at 27°C - Maximum monthly average mg/L 10 COD - Maximum monthly average mg/L 50 TSS - Maximum monthly average mg/L 10 TN - Maximum monthly average mg/L 10 Total Phosphorus - Maximum monthly average mg/L 1 Residual Chlorine - Instantaneous mg/L 1 Fecal Coliform – Maximum Monthly average MPN/100 mL 100 Fecal Coliform - Ceiling Limit (in any day) MPN/100 mL 230	As per the tender document, the treated effluent quality parameters such as BOD,COD,TSS,TN,and TP are expected to be achieved at the outlet of the biological treatment process (e.g., SBR). Therefore, a Disc Filter is not required solely to meet these parameters. Accordingly, we understand that the provision of a Disc Filter shall be based on the process requirement. Kindly confirm.	Tender Conditions Prevails.
24	Volume-2/ Section-7, Part8-136	Disc Filter	The specifications provided for Disc Filters appear to be specific to a particular vendor and are aligned with the offerings of only one or two vendors listed in the approved vendor list. Accordingly, we understand that the Disc Filter specifications shall be deemed acceptable as per the approved vendor's standard design. Kindly confirm.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
25	Volume-2/ Section-7, Part8-138	Filter Membrane: Stainless-steel screen/Mesh:SS-316L	In previous BWSSB tenders, Polyester filterclothorSS316 with 10 microns mounted on a Poly Propylene Glass/ABS frame was allowed in previous tenders like 10 MLD Komaghatta, 13 MLD Bairathi Khanne & CP-25, 26 & 27. Hence, we assume that the tenderer can also provide filter membranes made from polyester cloth or SS316materialfor this tender. Kindly confirm	Tender Conditions Prevails.
26	Volume-2/ Section-7, Part8– 137	.....the automatic valve and suction cleaning pump which shall be.....	This type of arrangement was not mentioned in several BWSSB tenders, such as the 10 MLD Komaghatta, 13 MLD Bairathi Khanne & CP-25, 26 & 27. Therefore, we understand that this arrangement should also be acceptable for the current tender.	For automatic Backwash operation this valve is suggested in fully submerged Disc filters, Tenderer can follow alternative arrangement as per vendor recommendation, considering auto operation system of Backwashing based on clogging alarm.
27	Volume-2/ Section-7, Part8-138	Protective Top Cover and Body cover along with frame structure:SS316 (Minimum 4mm for Body cover)	As per the tender document, we are proposing a fully submerged fiber disc filter. This type of filter does not require any covering, shed, or RCC roof. Therefore, we assume that a fully submerged fiber disc filter without a cover will be acceptable. Kindly confirm.	In cl.no. 8.26, Table "Technical Particulars Common for both Partially Submerged or Fully Submerged type Disc Filtration System", Tenderer can consider the specification, based on his design adopted either of two system. RCC structure as defined in the tender document is mandatory for both the system.

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28	Volume-2/ Section-7, Part5 -65	DISC Filter building	As per the tender document, we are proposing a fully submerged fiber disc filter. This type of filter does not require any covering, shed, or RCC roof. Therefore, we assume that a fully submerged fiber disc filter without a roof will be acceptable. Kindly confirm.	Tender Conditions Prevails.
29	Volume2,Page no. TECHNICAL SCHEDULE X FUNCTIONAL GUARANTEES OF THE PLANT, Pageno. Technical ScheduleX-2	a)Energy Consumption for TSPS, WwTP with Reuse PCA= [{PCD}*{(0.42*QA/QD)+(0.24*BA/BD)+(0.24*TA/TD)+(0.1*NA/ND)}] a)Energy Consumption for TSPS, WwTP without Reuse PCA= [{PCD}*{(0.4*QA/QD)+(0.24*BA/BD)+(0.24*TA/TD)+(0.1*NA/ND)}]	The specified formula for energy consumption is not applicable in the case of the Terminal Sewage Pumping Station(TSPS),as energy usage in this context is based on the volume of sewage pumped rather than on pollutant load parameters such as BOD, TSS, or TKN. Accordingly, we understand that the formula provided for calculating energy consumption for the Intermediate Sewage Pumping Station(ISPS)should also apply to the TSPS.	Tender Conditions Prevails.
30	Volume-2/ Section-7, Part5 -63	ALUMDOSING SYSTEM (FOR ALL TREATMENT PROCESSES)	As stated in the tender, an alum dosing system is required for chemical phosphorus removal. However, we assume that if the Total Phosphorus ≤ 1 mg/L, as specified in the tender, is achieved biologically through the Biological Nutrient Removal process, then the alum dosing system will not be necessary. Therefore, the alum dosing system should be considered optional and provided only if required, based on the process requirements to achieve Total Phosphorus ≤ 1 mg/L. Kindly confirm.	Tender Conditions Prevails.
31	Volume-2/ Section-7, Part3-13& 3-14	3.16.4Bid Drawings and Details (a) General and Process. (b) Mechanical (c) Electrical & Instrumentation	The tender specifies a large number of documents for submission. It is not feasible to submit all these documents at the bidding stage. We understand that the submittals under the categories a) General and Process shall be provided during the bidding stage, while all other documents will be submitted after the award of the contract. Kindly confirm.	The Tenderer shall submit all the document specified under the clause 3.16.4 Bid Drawings and Details for (a) General and Process, (b) Mechanical, (c) Electrical & Instrumentation. However, the "To-scale dimensional layout and/or installation drawings" as specified under the clause 3.16.4 (b) Mechanical (i) can be omitted during the bidding stage. However, Tenderer shall provide a undertaking for non-submission.
32	Volume–4 Drawings	Proposed Plot Plan	We kindly request that the proposed plot plan be provided in AutoCAD format.	Refer Addendum-1
33	Volume-2/ Section-7, Part5 -43 Volume-2/ Section-7, Part5 -49	SECONDARY CLARIFIERS (EA PROCESS) SECONDARY	The tender states that the bidder must provide calculations for operating the WWTP at design flows with one tank/unit/module offline for maintenance. We assume that this requirement also applies to secondary clarifiers. Kindly confirm.	Tender Conditions Prevails
34	Volume-2/ Section-7, Part7 -54	PLC shall be provided as a Hot Stand-by Controller	We understand that a redundant PLC system has been specified to prevent extended interruptions in plant operations and control. Alternatively, the same level of reliability can be ensured by using a standard non-redundant PLC system, supported by pre-programmed spare components such as CPU, power supply, etc. In the unlikely event of a PLC failure, the system can be restored within 1–2 hours using these spares. Kindly confirm whether a non-redundant PLC with essential pre-programmed spares is acceptable.	Not Acceptable.The Plant master controller station shall be provided with two identical central processors configured such that they operate in Hot-Standby mode.The system shall be designed and implemented such that when the Main processor fails, the Standby one shall automatically take over. The changeover shall be seamless, smooth and without any time delay and this Hot-Standby feature is to be proposed for WwTP SCADA control room as per Clause No.13.27, Part-13, Volume-2 of the Tender Document. Hence, the Tender Condition Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
35	Volume2/Section 7,Part7-54& part7-56	7.13.1 Redundant SCADA Dual redundant SCADA system and Historian software Operator work Station, loaded with Runtime SCADA Server SCADA Operator work station with licensed SCADA software SCADA Engineering work station with licensed SCADA software	The operators available at the STP are generally not trained to carry out programming or modifications in the SCADA system, and allowing them to do so may pose operational risks. SCADA modifications require expert programmers who possess the necessary licenses and skills. Therefore, we kindly request that only runtime software for SCADA be considered. Kindly confirm.	Not Acceptable. The PLC cum SCADA softwares capable of modification on Control System Logic updation cum SCADA Screen Graphics during run time without any impact on WwTP Process. The Control Logic & SCADA Graphics screens tested & witnessed during Factory Acceptance Test (FAT) at authorized Original Equipment Manufacturer's (as per approved OEMs list in Part-13) workshop and PLC Logics cum SCADA Graphics Screens in line with approved Plant Operational control philosophy prior to dispatch to site as per Clause No. 14.19.B, Part-14 of tender document. Hence, the critical logic updations are not allowed at site only minor modifications shall be updated through authorized licensed programmer of original equipment manufacturer's for which necessary training provided by authorized licensed programmer to the O&M team as per Clause no.15.1.6, Part-15 in tender document. The SCADA shall be a fully dual redundant microprocessor based computer system such that reliable and fully automatic plant control can be achieved by using Hot-Standby PLC system. The SCADA software functions are to be complied as per clause nos.13.27,13.34 & 13.35, Part-13 in Volume-2 of the tender document. Hence, the Tender Conditions Prevails.
36	Volume-2/ Section-7, Part7 -56	Historian Software	As alarms and trends are already stored within the computer- based SCADA system, which includes an inbuilt SQL server, a separate historian system is not necessary. Therefore, we request you to consider a PLC and SCADA system without the requirement for a separate historian. Kindly confirm.	Not Acceptable. In addition with Redundant SCADA system,the Historian software system shall be designed and configured to store data for a minimum of seven years data retrieval as per Clause No.7.13.4, Part-7 in Volume-2 of the tender document. Hence, the Tender Conditions Prevails.
37	SECTION2, INSTRUCTIONS TOTENDERERS (ITT) Page14of 236	3.1.2. (b)(ii) Construction Experience-Reuse Plant(with Tertiary Level)---	The proposed tertiary treatment technology is the ultrafiltration (UF) process. Given that the UF system is a critical component of the TTP and that the overall system guarantee is closely tied to membrane design and technology, it should be mandatory for the bidder to enter into a tie-up with a qualified membrane supplier. Accordingly, we propose the following qualification requirement: "The bidder must establish a tie-up with the ultra-filtration membrane supplier or its authorized distributor and submit a Technology Tie-up Agreement as part of the technical bid. The membrane supplierorits authorized distributor must have experience in supplying the proposed ultrafiltration system for at least one (1) tertiary treatment plant of minimum 17.5 MLD capacity (net output) in India for any State/Central Government organization or ULB, which has been operational and performing satisfactorily for a minimum of two years as of the tender calling date. A performance certificate from the end user, certified by an officer not below the rank of Executive Engineer, must be submitted." Kindly confirm.	Tender Conditions Prevails

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
38	SECTION2, INSTRUCTIONS TO TENDERERS (ITT) Page14of 236	3.1.2. (b)(ii) Construction Experience –Reuse Plant (with Tertiary Level) The Reuse Plant (with Tertiary Treatment)have to meet following criteria for the treated effluent Parameter / Unit / Specified Maximum Concentration Turbidity / NTU / <2 TDS / mg/l / <1000 TN / mg/l / <5 BOD / mg/l / <5 COD / mg/l / <30 TP / mg/l / <1	The proposed technology for tertiary treatment is ultrafiltration. As per the tender, bidders are required to have experience in reuse plants with a Total Nitrogen (TN) guarantee of <5mg/L. However, in reuse plants using treated sewage, a TN guarantee of < 5 mg/L cannot be ensured after the ultrafiltration process. This is because total nitrogen removal in ultrafiltration systems is incidental to the removal of suspended solids. Therefore, we kindly request that the TN guarantee requirement at the outlet of the tertiary treatment plant be adjusted to < 10 mg/L or as arising from the experience criteria. Kindly confirm.	Refer addendum-1
39	SECTION2, INSTRUCTIONS TO TENDERERS (ITT) Page14of 236	3.1.2. (b)(ii) Construction Experience –Reuse Plant (with Tertiary Level) The Reuse Plant (with Tertiary Treatment)have to meet following criteria for the treated effluent Parameter / Unit / Specified Maximum Concentration Turbidity / NTU / <2 TDS / mg/l / <1000 TN / mg/l / <5 BOD / mg/l / <5 COD / mg/l / <30 TP / mg/l / <1	As per the tender, bidders are required to have experience with reuse plants that meet a Total Dissolved Solids (TDS) guarantee of<1000mg/L. However, TDS removal is typically achieved in reuse plants with Reverse Osmosis (RO) systems. Since the technology proposed for tertiary treatment in this tender is ultrafiltration, which does not remove TDS, we kindly request the deletion of the TDS experience criteria or that the TDS values be considered as "As Arising." Kindly Confirm.	Refer addendum-1
40	TSPS &WwTPs Design / Sizing Criteria Part5-33	TREATED EFFLUENT QUALITY REQUIREMENTS FOR REUSE (APPLICABLE AS SPECIFIED) Item/Parameters/Description / Units / WwTP at Saulkere TN / mg/l / <5 Reuse Facilities: Item/Parameters/Description / Units / WwTP at Kogilu Mambrane Pore size / - / 0.01-0.03 microns to remove suspended solids, bacteria and viruses.	As per the tender, the proposed technology for tertiary treatment is the ultrafiltration process. Ultrafiltration membranes are designed to remove suspended solids, bacteria, and viruses, as outlined in Part 5-73 / 5-96 of the tender. Therefore, nitrogen removal in ultrafiltration systems is incidental to the removal of suspended solids and cannot be guaranteed. In light of this, we kindly request that the Total Nitrogen removal guarantee at the outlet of the tertiary treatment plant after ultrafiltration be set to < 10 mg/L or considered as "As Arising." Kindly Confirm.	The design effluent quality requirement for Reuse shall be as defined in the tender document.
41	TSPS & WwTPs Design/Sizing Criteria	TREATED EFFLUENT QUALITY REQUIREMENTS FOR REUSE (APPLICABLE AS SPECIFIED) Item/Parameters/Description / Units / WwTP at Saulkere TDS / mg/l / <1000 Reuse Facilities: Item/Parameters/Description / Units / WwTP at Saulkere Mambrane Pore size / - / 0.01-0.03 microns to remove suspended solids, bacteria and viruses.	As per the tender, the proposed technology for tertiary treatment is the ultrafiltration process. Ultrafiltration membranes are designed to remove suspended solids, bacteria, and viruses, as outlinedinPart5-68ofthetender.Therefore,nitrogen removal in ultrafiltration systems is incidental to the removal of suspended solids and cannot be guaranteed. In light of this, we kindly request that the Total Nitrogen removal guarantee at the outlet of the tertiary treatment plant after ultrafiltration be set to < 10 mg/L or considered as "As Arising." Kindly Confirm..	Tender Conditions Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
42	TSPS &WwTPs Design / Sizing Criteria Part5-68	Reuse Facilities: Item/Parameters/Description | Units | WwTP at Saulkere Reuse flow | MLD | 14	We assume that the "Reuse Flow" refers to the flow at the outlet of the Ultrafiltration Plant (Permeate Flow). Kindly confirm.	Refer addendum-1
43	TSPS & WwTPs Design / Sizing Criteria Part5-68	Reuse Facilities: Item/Parameters/Description | Units | WwTP at Saulkere No of membrane Trains | Nos | 5	The term "trains"is typically used for pressurized ultrafiltration systems and does not apply to submerged ultrafiltration systems, where the membrane modules are immersed in tanks or cells. Therefore, we assume that in the specified clause, the term "trains" refers to "cells or tanks" for submerged ultrafiltration systems. Additionally, the number of cells or tanks will be as per the recommendation of the UF vendor. Kindly confirm.	Tender Conditions Prevails. Tender conditions calls for minimum requirement.
44	TSPS &WwTPs Design / Sizing Criteria	Reuse Facilities: Item/Parameters/Description | Units | WwTP at Saulkere No of feed pump/ permeate pump (Working) | Nos | 4 Capacity of each feed pump/permeate pump | M3/hr | 175	The tender specifies the number of working feed pumps/permeate pumps as 2 for the Saulkere site. However, the actual number of working pumps may vary based on the UF vendor's design and the type of UF system (submerged/pressurized). Therefore, we request that the number and capacity of feed pumps/permeate pumps be allowed to follow the UF vendor's recommendation. Kindly confirm.	Tender Conditions Prevails. Tender conditions calls for minimum requirement.
45	TSPS &WwTPs Design / Sizing Criteria Part5-68	Reuse Facilities: Item/Parameters/Description | Units | WwTP at Saulkere Minimum UF plant recovery | % | 95	The maximum recovery achievable through UF systems is approximately 93-94%. Any additional recovery is possible only through the installation of extra UF backwash recovery systems that treat UF back wash waste and make it available for reuse. Since surplus flow is available at the inlet of the UF plant, we request that a minimum recovery of 93%beallowedfortheUF plants. Kindly confirm.	Refer Addendum-1
46	TSPS &WwTPs Design / Sizing Criteria Part5-68	Reuse Facilities: Item/Parameters/Description | Units | WwTP at Saulkere Mambrane Pore size | - | 0.01-0.03 microns to remove suspended solids, bacteria and viruses.	Ultrafiltration membranes typically have a porosity range between 0.01 and 0.07 microns, with 0.04 microns being the most commonly adopted nominal size in the industry. Therefore,werequestthatanominalporesizeof0.04microns for the UF membrane be allowed. Kindly confirm.	Refer Addendum-1
47	TSPS&WwTPs Design/Sizing Criteria Part5-68 & 8.18.16 Ultra Filtration System (Submerged/ Pressurized) Part8-111	Reuse Facilities: Item/Parameters/Description | Units | WwTP at Soulkere Membrane Material (MOC) | - | Poly-Vinyli-Dene-Fluoride (PVDF) reinforced with polyester or polypropylene backing layer. & K. PVDF Membrane with Braided: The membrane fiber features a Braided PVDF membrane formulation cast on polyester support braid.	PVDF reinforced with polyester is not necessary for submerged ultrafiltration systems, which operate at lower pressures compared to pressurized UF systems. Therefore, we request permission to provide moreadvanced,100%PVDF monolithic membranes for the submerged ultrafiltration system. These membranes offer the following advantages: Greater efficiency compared to braided PVDF membranes, as the PVDF layer tends to peel off during operation, reducing functionality. Longer membrane life span compared to braided PVDF. Higher reliability. Reduced chemical consumption compared to braided PVDF. Kindly confirm.	Refer Addendum-1

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
48	TSPS &WwTPs Design / Sizing Criteria Part5-68	Reuse Facilities: Item/Parameter/Description | Units | WwTP at Saulkere Membrane Type | - | Submerged (out-to-in) or Pressurized (outside-in or inside-out) hollow fiber membranes, designed to handle peak plant flow conditions.	The tender specifies that the ultrafiltration system should be designed to handle peak plant flow conditions. However, asper the tender, the required UF feed pumps will pump water to the ultrafiltrationsystemtogenerate14MLD of permeate flow for Saulkere Site. Therefore, we assume that peak plant flow conditions are not applicable for the design of the ultra filtration system. Kindly confirm.	Refer Addendum-1
49	TSPS &WwTPs Design / Sizing Criteria Part5-68	Reuse Facilities: Item/Parameter/Description | Units | WwTP at Saulkere Maximum Membrane Flux rate | - | 30 LMH	The maximum membrane flux specified in the tender, i.e., 30 LMH, is typically applicable for MBR systems that operate under high solids load (>5000 mg/L). For UF systems treating secondary treated wastewater, the solids load is usually below 20 mg/L. In such cases, a lower flux rate is unnecessary and could lead to a significant increase in capital costs without offering substantial benefits to the client. Therefore, we kindly request that the average membrane flux rate be allowed to be ≤ 40 LMH.	Tender Conditions Prevails
50	TSPS &WwTPs Design / Sizing Criteria Part5-69	Reuse Facilities: Item/Parameter/Description | Units | WwTP at Saulkere UF Membrane design load factor (on BOD and TSS) | - | 2	Please confirm that the load factor for UF membrane design refers to the design safety concerning the in let parameters to the UF system. Additionally, since UF membranes are designed to remove suspended solids, we understand that the design safety or load factor of two shall apply only to the inlet TSS values for the UF system. Kindly confirm.	Tender Conditions Prevails
51	8.18.16Ultra Filtration System (Submerged/ Pressurized) Part8-107	D. Working Principle of Submerged UF Process: After mechanical pretreatment, the wastewater is fed to the membrane tanks where the water is separated from the solids by the SUF membranes. The liquid is typically fed below the submerged membrane modules.	We assume that the bidder is allowed to provide rotary drum screens as a mechanical pre-treatment for the submerged ultrafiltration process. Kindly confirm.	Tender Conditions Prevails. It is after Disc filtration system only.
52	8.18.16 UltraFiltration System (Submerged/ Pressurized) Part8-110	I.Single Header Design The SUF product consists of bundles of hollow fiber membranes potted only at the lower end of each bundle. The non-potted ends of the fibers (at the top of the bundle)are individually sealed and move freely in the liquid.	The tender specifies that the submerged ultrafiltration system shall have a single header design. However, issues typically. Associated with double header designs, such as the presence of fibrous material and high MLSS, are not relevant in treated sewage. Double header designs are generally more efficient, providing uniform withdrawal of water from the modules. Therefore, we request approval for the bidder to offer the submerged ultrafiltration header design based on the UF manufacturer's recommendation/design. Kindly confirm.	Refer Addendum-1
53	8.18.16 Ultra Filtration System (Submerged/ Pressurized) Part8-113	Technical Particular | Parameters Spare Space for module per train | | 10 %	We understand that for the submerged UF system, the term "train" shall be interpreted as "cell/tank," and a 10% spare space for modules shall be provided per "cell/tank." Kindly confirm.	Refer Addendum-1
54	8.18.16UltraFiltration System (Submerged/ Pressurized) Part8-113	Technical Particular | Parameters Minimum Operating Life of Membrane | Years | 10	The minimum operating life of membranes varies depending on several factors, including the type of system and vendor, and typically ranges from 5 years for pressurized ultrafiltration systems to 7 years for submerged ultrafiltration systems. Therefore, we request you to allow the bidder to propose a minimum operating life of membranes as 7 years. Kindly confirm.	Tender Condition Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
55	Volume -1/3.1.2 (b)(i)	Experience in Key Activities Experience in Key Activities Experience in Execution of WwTPsi. The Tenderer as a sole entity or a Lead Partner and or Partner in a Joint Venture shall have successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of minimum One (1) No. WwTP of 12 MLD capacity and above or Two (2) Nos.Waste Water Treatment Plants of minimum 6 MLD capacity with Biological Nutrient Removal (BNR) technology of process like , A2O, EA, IFAS, MBBR, SBR, with SCADA Integration, to meet effluent standard as BOD ≤ 10 mg/L, COD ≤ 50 mg/L, TSS ≤ 10 mg/L, TN ≤ 10 mg/L, TP ≤ 1 mg/L and fecal coliform < 100MPN/100ml should be in operation for a period of one year during the last 5 years as on date of Bid submission.	Qualification criteria states that the plants must use one of the listed BNR Technologies as stated above. However, we would like to highlight that the plants which we have executed utilized Membrane Bioreactor (MBR) technology, which is a more advanced and reliable process compared to MBBR, and it fully meets the effluent discharge standards mentioned in the tender & it is finely operational from previous years. A few key advantages of MBR over MBBR include: •Higher effluent quality suitable for reuse applications •Smaller footprint, ideal for space-constrained sites •Elimination of secondary clarifiers due to membrane-based separation •Greater process stability and operational consistency •Better adaptability to stringent regulatory requirements Considering these points, we kindly request you to consider the plant executed using MBR technology as equivalent to those using MBBR technology under the qualification criteria	Tender Conditions Prevails.
56	Volume-2 / Section-7, Part 5 -32	Influent Wastewater Characteristics pH — 6.5-7.5 BOD — mg/L — 350 COD — mg/L — 800 TSS — mg/L — 450 VSS — mg/L — 360 TKN — mg/L — 70 NH4-N — mg/L — 45 Total Phosphorus — mg/L — 7	As per referred clause in the tender document, For BOD=350 mg/L, the corresponding COD value is 800 mg/L. The COD/BOD ratio is on the higher side. In normal practice BOD= 250 mg/L and COD= 425 mg/L is considered as per CPHEEO. We presume that there are no ingresses of Industrial effluent in the Sewage and the COD is biodegradable. Kindly Confirm.	The design influent parameters requirement shall be as defined Part 5, Volume 2 / Section 7. "TSPS & WwTPs Design / Sizing Criteria".
57	Volume-2 / Section-7, Part 5 -32	Influent Wastewater Characteristics COD — mg/L — 800	We presume that there are no ingresses of Industrial effluent in the Sewage and more than 95% of COD is biodegradable and less than 5% of COD is non-biodegradable. Or the treated Effluent COD performance requirements may be relaxed subject to the Contractor proving the presence of non-biodegradable COD in the influent which cannot be treated using the processes provided at the Works Kindly Confirm.	Bidder may consider Non-biodegradable COD as per the bidder design.
58	Volume-1 / Page 16 of 234	Technology provider shall provide the evidence that he has successfully supplied the technology for at least 1 (One) WWTP same as 3.1.2 (b)(i) 3.1.2. (b) (i) Experience in Execution of WwTPs The tenderer as a sole entity or a Lead Partner and or Partner in a Joint Venture shall have successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of minimum One (1) No. WwTP of 34 MLD capacity and above or Two (2) Nos. of Waste Water Treatment Plants of minimum 17 MLD capacity with Biological Nutrient Removal (BNR) technology of process like , A2O, EA, IFAS, MBBR, SBR, with SCADA Integration, to meet effluent standard as BOD ≤ 10 mg/L, COD ≤ 50 mg/L, TSS ≤ 10 mg/L, TN ≤ 10 mg/L, TP ≤ 1 mg/L and fecal MPN/100 ml and should be in operation for a period of one year during the last 5 years as on date of Bid submission.	As per the Tender document, Technology provider shall provide the evidence that he has successfully supplied the technology for at least 1 (One) WWTP same as 3.1.2 (b)(i). We understand that the referred clause has mentioned the effluent quality standards at the outlet of STP and not after the secondary treatment process. Therefore, for the purpose of demonstrating compliance, the Technology Provider supplying the secondary treatment process must ensure that the treated effluent meets the following key parameters at the final outlet, as specified in the clause — excluding fecal coliform: •BOD ≤ 10 mg/L •COD ≤ 50 mg/L •TSS ≤ 10 mg/L •Total Nitrogen (TN) ≤ 10 mg/L •Total Phosphorus (TP) ≤ 1 mg/L Kindly Confirm.	Refer Addendum-1

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
59	Volume-1 / Page 14 of 236	Technology provider shall provide the evidence that he has successfully supplied the technology for at least 1 (One) WWTP same as 3.1.2 (b)(i)	As per the Tender document, the Technology Provider is required to provide evidence of having successfully supplied the technology for at least one (1) wastewater treatment plant (WWTP) as per Clause 3.1.2(b)(i). We note that the referred clause does not explicitly mention the required capacity of this reference WWTP. We understand that the Technology Provider must demonstrate having successfully supplied the technology for at least one (1) WWTP of 34 MLD capacity in line with Clause 3.1.2(b)(i). Kindly confirm	Refer Addendum-1
60	Volume-2 / Section-7, Part 5 -58	N-1 condition: - The Bidder shall provide calculations for operating the WwTP at Design Flow with 1 SBR tank offline for maintenance.	In the previous tender of BWSSB-i.e. CP25 package and 10 MLD STP at Jakkur project which was based on SBR technology, this particular clause had been deleted. We presume that same shall be followed for the present tender also. Kindly confirm.	Tender Conditions Prevails.
61	Volume-2 / Section-7, Part 5 -59	HRT at average flow: 24 Hrs.	HRT is the derived factor based on the selected SBR cycle time and Inlet characteristics of the sewage. We understand that the HRT shall be as per process requirement and as per recommendation of Technology provider to achieve the outlet sewage characteristics as per tender requirement. Kindly Confirm.	Tender Conditions Prevails.
62	Volume-2 / Section-7, Part 5 -59	Mixing with Air: For pre-zone or selector zone mixing, dedicated coarse bubble diffuser shall be provided with dedicated flow measurement to each pre-zone or selector zone.	In the previously published tenders by BWSSB :- 10 MLD STP Malathahalli and 10 MLD STP Kempambudhi there was no such criteria for air flow measurement to selector zone. Hence, we presume that the same criteria is not applicable for this project also. Kindly confirm.	Tender Conditions Prevails
63	Volume-2 / Section-7, Part 8 -98	Decanters (For SBR system)	We presume that all decanter specifications shall be acceptable as per the technology providers standard specifications. As bidder has to submit the technology Tie-Up agreement in his technical bid. Kindly Confirm.	Tenderer or Technology supplier can adopt with his own Patent concept of Decanter Equipment, but has to justify such thickness adopted for the steel member with suitable Structural Analysis Report for the fabricated Steel Structure of Decanter Mechanism.
64	Volume-2 / Section-7, Part 8 -98	Decanters (For SBR system) All the withdrawal SS 316L Pipes shall be of thickness not less than Schedule 20S above 200 mm and Schedule below 200 mm shall be of Schedule 40S, and all the pipes shall be of Seamless type only.	We presume that all decanter mechanism is an integral part of Technology components. Also, bidder has to submit the technology Tie-Up agreement in his technical bid. Therefore, pipe schedule(s) mentioned under decanter specifications are not applicable for decanters. Kindly Confirm.	Tenderer or Technology supplier can adopt with his own Patent concept of Decanter Equipment, but has to justify such thickness adopted for the steel member with suitable Structural Analysis Report for the fabricated Steel Structure of Decanter Mechanism.
65	Volume-2 / Section-7, Part 5 -60	Decanter Weir Length: Minimum decanting flow rate of 1.7 times the average flow shall be considered to calculate the decanter weir length in each basin.	In the previously published tenders by BWSSB :- 10 MLD STP Malathahalli and 10 MLD STP Kempambudhi, This specific criteria was not mentioned. Hence we presume that the same criteria is not applicable for this project also. Kindly confirm.	Tender Conditions Prevails.
66	Volume-2 / Section-7, Part 5 -60	Maximum Decanter Weir loading rate: 120 m3/h/m	In the previous tender of BWSSB-i.e. CP25 package based on SBR technology, the Maximum Decanter Weir loading rate was 125 m3/h/m (Addendum-8). We presume that same shall be followed for the present tender also. Kindly confirm.	Tender Conditions Prevails.
67	Volume-2 / Section-7, Part 5 -61	Peak Oxygen Demand Factor: 1.3	In the previously published tenders by BWSSB :- 10 MLD STP Malathahalli and 10 MLD STP Kempambudhi there was no criteria for Peak Oxygen Demand Factor. Hence we presume that the same criteria is not applicable for this project also. Kindly Confirm.	Tender Conditions Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
68	Volume-2 / Section-7, Part 5 -62	8. Process Air Blowers α: Oxygen Transfer Correction Factor - 0.6 β: Salinity - Surface Tension Correction Factor - 0.95 F: Fouling Factor - 0.8	The given factors in the tender document, Alpha, Beta and Fouling Factor, depend on the diffuser type, MoC, and self-cleaning capacity which can vary within the range given in the latest edition of Metcalf and Eddy. Therefore, we presume that the given factors can be considered as per the latest edition of Metcalf and Eddy to design the aeration system. Kindly Confirm.	Tender Conditions Prevails.
69	Volume-2 / Section-7, Part 8 -82 to Part 8 -85 Volume-2 / Section-7, Part 8 -100 to Part 8 -101	8.18 Aeration system with allied Equipments 8.18.1 Tubular Type Diffusers & 8.18.15.2 Diffuser system for IFAS 8.18.15.3 Type of Diffuser System 8.18.15.4 Diffuser Elements 8.18.15.5 Testing for Diffuser system 8.18.15.6 Air Piping to Diffusers	In the Tender document, two different Diffuser specifications are given as mentioned in referred clause. We understand that the Diffuser specifications given in the Clause 8.18.15.2 to 8.18.15.6 are applicable to the aeration system of all secondary treatment process. Kindly Confirm.	Diffuser specification shall be as per Cl.no.8.18.1 only and Cl.no. 8.18.15.2 to 8.18.15.6 stands deleted Refer Addendum-1
70	Volume-2 / Section-7, Part 5 -62	Process Air Blowers for all Treatment Processes Design SOTE per m depth of water (Minimum to be provided and maximum to be used as design basis) – 5.50 %	The SOTE of the latest advanced diffusers are achieving more than that specified in the tender. Kindly allow us to provide the SOTE as per the diffuser manufacturer's design. The letter from the diffuser manufacturer shall be submitted during detailed engineering stage. Kindly Confirm.	Tender Conditions Prevails.
71	Volume-2 / Section-7, Part 8-82	8.18 Fine Bubble tubular Membrane Diffusers 8.18.1 Tubular Type Diffusers (h) The bubble should retain a solid spherical shape. The bubbles produced from the diffuser shall be minimum 0.5 mm.	The perforation and bubble size of diffuser may varies from Manufacturer to Manufacturer with a guarantee for the performance. Kindly request to accept the perforation and bubble size as per Diffuser Manufacturers Design. Kindly Confirm.	Tender Conditions Prevails.
72	Volume-2 / Section-7, Part 8-82	8.18 Fine Bubble tubular Membrane Diffusers 8.18.1 Tubular Type Diffusers …….. maximum outer diameter (OD) shall not be more than 90 mm.	Kindly request to accept the outer diameter (OD) as per design of Diffuser Manufacturers as specified in the tender document. As the outer diameter (OD) of diffuser varies from Manufacturer to Manufacturer with a guarantee for the performance. Kindly Confirm.	Tender Conditions Prevails.
73	Volume-2 / Section-7, Part 8-82	8.18 Fine Bubble tubular Membrane Diffusers 8.18.1 Tubular Type Diffusers (b) The diffuser shall be fine bubble membrane tube type diffuser consisting of a single piece injection-molded polypropylene/uPVC tube surrounded by a membrane sleeve …….	The provided specifications for diffusers are pertaining to a specific vendor. Therefore, we understand that the diffuser specifications of any approved vendor M/s Environmental Dynamics, M/s OTT GMBH, M/s Rehau Polymer, M/s SSI Aeration mentioned in 'CONSOLIDATED Mechanical Equipment VENDOR LIST' shall be acceptable. Kindly confirm.	It has been reconfirmed that the listed vendors in approved list are satisfying the Bid Specification requirements. Hence Tender Conditions Prevails.
74	Volume-2 / Section-7, Part 8-84 & Volume-2 / Section-7, Part 5- 9	8-18 Fine Bubble Tubular Membrane Diffusers 8.18.1 Tubular Type Diffusers (n) Provide a back-flow prevention device built integrally with the diffuser that prevents backflow into the diffuser and air piping. & Contractor shall provide back flow prevention mechanism / check valve inside each diffuser to prevent intrusion of liquid and/or solids into the diffuser and air piping under normal operating conditions of aeration system.	Many diffuser manufacturers under approved vendor list of the tender provide slits on the membrane which act as a prevention of backflow into the diffuser. These slits automatically get closed when air supply is stopped. We understand that any separate prevention device/mechanism is not required in this case. Also, the same was accepted in CP-25. CP-26 & CP-27 tenders called by BWSSB. Kindly Confirm.	Yes confirmed. Diffuser shall be provided with a back flow prevention device built integrally with the diffuser that prevents backflow or Diffuser membrane slits can also act as a prevention of backflow into the diffuser. Diffuser slits automatically get closed when air supply is stopped into the diffuser and air piping. Refer Addendum-1

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
75	Volume-2 / Section-7, Part 8 - 90	Si.no. | Description | Material of Construction f | Acoustic enclosure | Al-Zn coated steel, insulated with glass wool	In recent days various MOC of Acoustic closures for Turbo air blowers are available. Kindly allow tenderer to provide acoustic enclosure for Turbo Blower of MOC as per manufacturer's standard. Kindly confirm.	Superior material than specified in the tender can be adopted with justification and without any cost implication to BWSSB.
76	Volume-2 / Section-7, Part 8 - 161	40 Disc Filtration System List of Approved Suppliers: Manufacturer for Disc Filter: M/s Hydro Tech M/s Xylem M/s Estragua M/s Jash Invent M/s Huber M/s Aqua Aerobics M/s Evoqua water Technologies	M/s Yucheon has been accepted as disc filter supplier In the previously published many tenders by BWSSB such as STP packages of CP-25, 26 and 27, 10 MLD STP at Jakkur,10 Komaghatta, 13 MLD ByrathiKanne. Therefore, we presume that the tenderer can propose M/s. Yucheon Make Fiber Disc filter for this tender. Kindly Confirm.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
77	Volume-2 / Section-7, Part 5 -65	DISC FILTER Design flow per unit: Designed for 100% Peak Flows including recycle flows - Irrespective process	We understand that the Design flow for the Disc filter unit shall be maximum incoming flow to the disc filter unit. In the case of SBR system, FDF unit shall be designed with the average flow or the decant flow whichever is higher. Kindly confirm.	Tender Conditions Prevails.
78	Volume-2 / Section-7, Part 1 -11 Volume-2 / Section-7, Part 5-32	Parameters | Unit | Value TREATED EFFLUENT QUALITY REQUIREMENTS - DISCHARGE pH – Instantaneous range | - | 6.5-8.0 BOD_3 at 20°C - Maximum monthly average | mg/L | 10 COD - Maximum monthly average | mg/L | 50 TSS - Maximum monthly average | mg/L | 10 TN - Maximum monthly average | mg/L | 10 Total Phosphorus - Maximum monthly average | mg/L | 1 Residual Chlorine - Instantaneous | mg/L | 1 Fecal Coliform – Maximum Monthly average | MPN/100 mL | 100 Fecal Coliform – Ceiling Limit (in any day) | MPN/100 mL | 230	As per the tender document the required treated effluent quality requirements such as BOD, COD, TSS, TN & TP can be achievable at the outlet of the biological treatment process like SBR. In such cases there shall be no need of Disc filter to be proposed for achieving the treated effluent quality. Hence we understand that the Disc filter shall be provided as per the process requirement. Kindly confirm.	Tender Conditions Prevails.
79	Volume-2 / Section-7, Part 8 -136	Disc Filter	The provided specifications for Disc Filters are pertaining to a specific vendor and this are compiled by only one or two vendor's mentioned in the approved vendor list. Therefore, we understand that the Disc filter specifications shall be acceptable as per approved vendor. Kindly confirm.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
80	Volume-2 / Section-7, Part 8 - 138	Filter Membrane: Stainless steel screen / Mesh: SS-316L	Polyester filter cloth or SS 316 with 10 microns mounted on a Poly Propylene Glass/ABS frame was mentioned in previous tenders like 10 MLD Komaghatta, 13 MLD BairathiKhanne& CP-25, 26 & 27. Hence, we understand such requirement shall be applicable for this said tender. Kindly Confirm.	Tender Conditions Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
81	Volume-2 / Section-7, Part 8 – 137	….. the automatic valve and suction cleaning pump which shall be	Automatic valves for suction cleaning pump arrangement was not mentioned in previous tenders like 10 MLD Komaghatta, 13 MLD Bairathi Khanne& CP-25, 26 & 27. Hence, we understand such requirement shall not be applicable for this said tender. Kindly Confirm.	For automatic Backwash operation this valve is suggested in fully submerged Disc filters, Tenderer can follow alternative arrangement as per vendor recommendation, considering auto operation system of Backwashing based on clogging alarm.
82	Volume-2 / Section-7, Part 8 - 138	Protective Top Cover and Body cover along with frame structure : SS316 (Minimum 4mm for Body cover)	As per tender document we are proposing fully submerged fiber disc filter. This type of filter need not require any kind of covering/shed/RCC roof. Therefore we presume that fully submerged Fiber Disc Filter without cover shall be acceptable. Kindly confirm.	In cl.no. 8.26, Table "Technical Particulars Common for both Partially Submerged or Fully Submerged type Disc Filtration System", Tenderer can consider the specification, based on his design adopted either of two system. RCC structure as defined in the tender document is mandatory for both the system.
83	Volume-2 / Section-7, Part 5 -65	DISC Filter building	As per tender document we are proposing fully submerged fiber disc filter. This type of filter need not require any kind of covering/shed/RCC roof. Therefore, we presume that fully submerged Fiber Disc Filter without roof shall be acceptable. Kindly confirm	Tender Conditions Prevails.
84	Volume 2, Page no. TECHNICAL SCHEDULE X FUNCTIONAL GUARANTEES OF THE PLANT, Page no. Technical Schedule X- 2	a)Energy Consumption for TSPS, WwTP with Reuse PCA = [{PCD}*{(0.42*QA/QD)+(0.24*BA/BD)+(0.24*TA/TD)+(0.1*NA/ND)}] a)Energy Consumption for TSPS, WwTP without Reuse PCA = [{PCD}*{(0.4*QA/QD)+(0.24*BA/BD)+(0.24*TA/TD)+(0.1*NA/ND)}]	The said formula for energy consumption shall not be applicable in case the Terminal Sewage Pumping Station as the value is energy consumption value can be arrived on basis sewage quantity pumped and not on pollutant loadings like BOD/TSS/TKN. Therefore, we understand that the formulae provided for determining the energy consumption of ISPS shall be applicable for TSPS. Kindly confirm.	Tender Conditions Prevails.
85	Volume-2 / Section-7, Part 5 -63	ALUM DOSING SYSTEM (FOR ALL TREATMENT PROCESSES)	As stated in the tender an alum dosing system shall be required for chemical phosphorus removal. We presume that if Total Phosphorous ≤ 1 mg/l as mentioned in the tender is achieved biologically i.e. Biological nutrient removal process then Alum Dosing system shall not be required. Therefore, alum dosing system shall be optional and shall be provided if required as per process requirement to achieve Total Phosphorous as ≤ 1 mg/l. Kindly Confirm.	Tender Conditions Prevails.

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<table>
<tr><th>Sr. No.</th><th>Vol.No. / Pg. No.</th><th>Description</th><th>Query</th><th>Reply</th></tr>
<tr><td>86</td><td>Volume-2 / Section-7,
Part 5 -18</td><td>5.15Hydraulic Design Requirement

• Maximum pipe flow velocity shall be no more than 1.0 m/s for all gravity flo and pump suction lines unless specified otherwise.
• Maximum pipe flow velocity shall be no more than 1.5 m/s for all pumpe discharge lines unless specified otherwise.
• Calculated normal velocity (at 20°C and 1atm) of air piping shall not be mo than 16 m/s.
•For channels, the maximum velocity shall be no more than 1.0 m/s.
• For liquids the maximum velocity through gate opening shall be no more than 1 m/s unless specified otherwise.</td><td>In the tender document, mentioned Velocities in tender document are on lower side: Following table shows velocities for various services which are used as per good engineering practices, in many STP's.

<table><tr><th>Sr. No.</th><th>Service</th><th>Design Velocity m/s</th><th>Limitations</th></tr><tr><td>1</td><td>Gravity Lines for Sewage & Water</td><td>0.6 – 1.2 Designed as pipe line flowing full.</td><td>Min. Velocity shall not be less than 0.6 m/sec. Max. Velocity up to 1.2 m/sec is allowable at Peak Flow.</td></tr><tr><td>2</td><td>Pressure Lines for Sewage & Water</td><td>0.6 – 2.5</td><td>Min. Velocity shall not be less than 0.6 m/sec. Max. Velocity up to 2.5 m/sec is allowable at Peak Flow.</td></tr><tr><td>3</td><td>Air (Pressurized Lines)</td><td>18 – 22</td><td>Max. Velocity shall not be more than 25 m/sec in any section.</td></tr><tr><td>4</td><td>Scum & Sludge Lines</td><td>0.6 – 1.5</td><td>Irrespective of flow, Diameter shall not be less than 150 mm for Gravity Lines.</td></tr><tr><td>5</td><td>Chemical Feed Lines</td><td>0.6 – 1.5</td><td>Irrespective of flow, Diameter shall not less than 20 mm.</td></tr></table>
We presume that, above table shall be followed for proposed STPs.
Kindly Confirm.</td><td>Tender Conditions Prevails.</td></tr>
<tr><td>87</td><td>Volume-2 / Section-7,
Part 5 -13</td><td>While selecting any type of pump and blower, priority shall be given to higher pump/blower efficiency and lower power consumption and shall ensure that pump/blower can operate at high efficiency throughout its service life. At minimum contractor shall ensure efficiencies of pump/blower as listed below:
•Minimum efficiency of Submersible Pumps for TSPS shall be 70%
•Minimum efficiency of Axial Tubular Pump (MLR) shall be 70%
• Minimum efficiency of RAS Pump (Horizontal/Vertical Non-clog solid handlin shall be 65%.
• Minimum efficiency of Sludge Pump (Progressive Cavity/Screw pump) shall b 45%.
•Minimum efficiency of Rotary Tri-Lobe blower shall be 70%
•Minimum efficiency of Centrifugal Turbo blower shall be 90%</td><td>The efficiency of the various equipment are mostly depends on the suitable model selection for duty condition and Manufacturer's design.
Therefore kindly accept the efficiency of the various equipment as per design of manufacturer .
Kindly Confirm.</td><td>Refer Addendum-1</td></tr>
<tr><td>88</td><td>Volume-2 / Section-7,
Part 3-13 & 3-14</td><td>3.16.4 Bid Drawings and Details
(a) General and Process.
(b) Mechanical
(c) Electrical & Instrumentation</td><td>Tender specifies vast submission of documents. It is not possible to submit all these documents at bidding stage.
We understand that submittals given under the head a) General and Process shall be submitted during the bidding stage. All other documents shall be submitted after award of contract.
Kindly confirm.</td><td>The Tenderer shall submit all the document specified under the clause 3.16.4 Bid Drawings and Details for (a) General and Process, (b) Mechanical, (c) Electrical & Instrumentation. However, the "To-scale dimensional layout and/or installation drawings" as specified under the clause 3.16.4 (b) Mechanical (i) can be omitted during the bidding stage. However, Tenderer shall provide a undertaking for non-submission.</td></tr>
<tr><td>89</td><td>Volume – 4 Drawings</td><td>Proposed Plot Plan</td><td>Kindly request to provide the proposed plot plan in AutoCAD format.</td><td>Refer Addendum-1</td></tr>
</table>

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
90	Volume-2 / Section-7, Part 5 -43 Volume-2 / Section-7, Part 5 -49 Volume-2 / Section-7, Part 5 -55	SECONDARY CLARIFIERS (EA PROCESS) SECONDARY CLARIFIERS (IFAS PROCESS) SECONDARY CLARIFIERS (MBBR PROCESS)	Tender mentions that, bidder shall provide calculations for operating the WwTP at Design Flows with 1 tank/unit/module offline for maintenance. We presume that the same is applicable for secondary clarifiers as well. Kindly Confirm.	Tender Conditions Prevail
91	Volume-2 / Section-7, Part 8 –115	8.20 Primary/Secondary Clarifiers	We understand that all wetted part of Primary/Secondary Clarifiers shall be of SS 316L considering the 10 years of operation and maintenance.	Superior material than specified in the tender can be adopted with justification and without any cost implication to BWSSB.
92	Volume-2 / Section-7, Part 5- 9	The floors of all liquid-holding structures shall be appropriately sloped and trenches and drain sumps shall be provided at the bottoms of such slopes to facilitate complete drainage of liquid……	Generally, slope is not required in aeration basin. RAS/SAS pump pit shall be provided in aeration basins for sludge collection and pumping. If slope is provided, it will affect the diffuser grid installation, alignment and performance. Kindly Confirm.	The slope requirement shall be as per the tender requirement. And bidder can propose very mild slope may be of 1:5000.
93	Volume-2 / Section-7, Part 5- 9	For liquid-holding structures, the drain piping and fittings shall be sized such that the entire structure can be drained by gravity in no more than eight (8) hours.	We understand that this requirement is not applicable to aeration tank. Kindly Confirm.	Tender Conditions Prevails
94	Volume-2 / Section-7, Part 5-10	The Plant Drain Pumping Station, Plant Drain Pumps, and other related equipment and controls shall be designed and sized to allow draining of the structure with the largest volume from full to empty within eight (8) hours.	We understand that this requirement is not applicable to aeration tank. Kindly Confirm.	Tender Conditions Prevails
95	General	MOC Of Pipe line for Various Applications	MOC for pipe line are missing in the tender document. We request you to allow us to provide following MoCs for Various applications: Kindly Confirm	Tender Conditions Prevails

Sr. No.	Service	Type of Flow	MOC
1	Waste Water / Sludge	Gravity	RCC NP-3 Class
2	Waste Water / Sludge	Gravity/Pressurized	CI Class "LA" / DI K-9
3	Service Water	Gravity Pressurized	GI "C" Class
4	Air Lines: Headers, Vertical Down-comers	Pressurized	Above Water: MS Sand/Shot Blasted, Epoxy Painted Under Water: SS 304
5a	Air Grid Piping: Aeration Zone	Pressurized	UPVC Schedule 40
5b	Air Grid Piping: Selector Zone	Pressurized	SS 304
6	Chemicals	Gravity Pressurized	SS 304 except Chlorine & FeCl3
7	Chlorine & FeCl3	Gravity Pressurized	Schedule 40 UPVC

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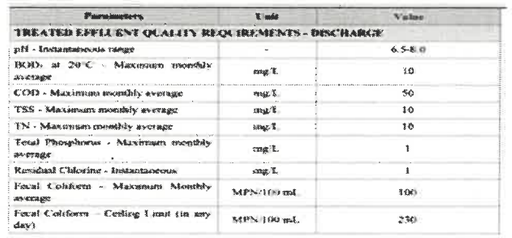
Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
96	Volume-2 / Section-7, Part 1 -11 Volume-2 / Section-7, Part 5-32	 TREATED EFFLUENT QUALITY REQUIREMENTS - DISCHARGE pH - Instantaneous range : - : 6.5-8.0 BOD, at 20°C - Maximum monthly average : mg/L : 10 COD - Maximum monthly average : mg/L : 50 TSS - Maximum monthly average : mg/L : 10 TN - Maximum monthly average : mg/L : 10 Total Phosphorus - Maximum monthly average : mg/L : 1 Residual Chlorine - Instantaneous : mg/L : 1 Fecal Coliform - Maximum Monthly average : MPN/100 mL : 100 Fecal Coliform - Ceiling Limit (in any day) : MPN/100 mL : 230	As per the tender document the required treated effluent quality requirements such as BOD, COD, TSS, TN & TP can be achievable at the outlet of the biological treatment process like SBR. In such cases there shall be no need of Disc filter to be proposed for achieving the treated effluent quality. Hence we understand that the Disc filter shall be provided as per the process requirement. Kindly confirm.	Tender Conditions Prevails.
97	Volume-2 / Section-7, Part 8 -136	Disc Filter	The provided specifications for Disc Filters are pertaining to a specific vendor and this are compiled by only one or two vendor's mentioned in the approved vendor list. Therefore, we understand that the Disc filter specifications shall be acceptable as per approved vendor. Kindly confirm.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
98	Volume-2 / Section-7, Part7 -54	PLC shall be provided as a Hot Stand-by Controller	We understand that redundant PLC has been specified to avoid long interruption in the plant operation & controls. Alternatively, it can also be achieved by providing normal non-redundant PLC along with spares such as pre-programmed PLC hardware like CPU, Power supply etc. In the unlikely event of PLC system failure, the same can be made functional within 1-2 hrs with the help of the spares. Kindly confirm that we can consider non-redundant PLC with required spares.	Not Acceptable.The Plant master controller station shall be provided with two identical central processors configured such that they operate in Hot-Standby mode.The system shall be designed and implemented such that when the Main processor fails, the Standby one shall automatically take over. The changeover shall be seamless, smooth and without any time delay and this Hot-Standby feature is to be proposed for WwTP SCADA control room as per Clause No.13.27, Part-13, Volume-2 of the Tender Document. Hence, the Tender Condition Prevails.
99	Volume 2/Section 7, Part 7-54 & part 7-56	7.13.1 Redundant SCADA Dual redundant SCADA system and Historian software Operator work Station, loaded with Runtime SCADA Server SCADA Operator work station with licensed SCADA software SCADA Engineering work station with licensed SCADA software	Operator available in STP plant are not skilled to do programming of SCADA system and it is dangerous to do changes in SCADA with them. For this Expert programmer is required, who always carry required licenses with them. Hence, we request you to consider runtime software for SCADA.	Not Acceptable. The PLC cum SCADA softwares capable of modification on Control System Logic updation cum SCADA Screen Graphics during run time without any impact on WwTP Process. The Control Logic & SCADA Graphics screens tested & witnessed during Factory Acceptance Test (FAT) at authorized Original Equipment Manufacturer's (as per approved OEMs list in Part-13) workshop and PLC Logics cum SCADA Graphics Screens in line with approved Plant Operational control philosophy prior to dispatch to site as per Clause No. 14.19.B, Part-14 of tender document. Hence, the critical logic updations are not allowed at site only minor modifications shall be updated through authorized licensed programmer of original equipment manufacturer's for which necessary training provided by authorized licensed programmer to the O&M team as per Clause no.15.1.6, Part-15 in tender document. The SCADA shall be a fully dual redundant microprocessor based computer system such that reliable and fully automatic plant control can be achieved by using Hot-Standby PLC system. The SCADA software functions are to be complied as per clause nos.13.27,13.34 & 13.35, Part-13 in Volume-2 of the tender document. Hence, the Tender Conditions Prevails.
100	Volume-2 / Section-7, Part 7 -56	Historian Software	Alarm & trends are store in computer-based SCADA with inbuilt capability SQL server, hence separate system is not required to store data. We request you to consider PLC & SCADA system without Historian.	Not Acceptable. In addition with Redundant SCADA system,the Historian software system shall be designed and configured to store data for a minimum of seven years data retrieval as per Clause No.7.13.4, Part-7 in Volume-2 of the tender document. Hence, the Tender Conditions Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
101	SECTION 2, INSTRUCTIONS TO TENDERERS (ITT) Page 14 of 236	3.1.2. (b)(ii) Construction Experience- Reuse Plant (with Tertiary Level)---	The technology proposed for tertiary treatment is ultrafiltration process. Ultrafiltration system is the most critical aspect of the tertiary treatment plant as the system guarantee is dependent upon the UF design and membrane technology . Hence, it shall be mandatory to tie-up with membrane supplier as per the following experience criteria :- "Bidder must tie-up with the ultra-filtration membrane supplier or its authorized distributor for Ultrafiltration Technology and shall submit Technology Tie-up Agreement as a part of their technical bid. The membrane supplier or its authorized distributor shall have experience of providing proposed ultrafiltration system for at least One (1) TTP of min. 14 MLD capacity (Net output) in India for any State/Central Government organizations /ULB's which is working satisfactorily for at least two years as on date of calling of tender. Performance Certificate for work should be issued by the end user, duly certified by officer not below the rank of Executive Engineer should be enclosed." Kindly confirm.	Tender Conditions Prevails.
102	SECTION 2, INSTRUCTIONS TO TENDERERS (ITT) Page 14 of 236	3.1.2. (b)(ii) Construction Experience- Reuse Plant (with Tertiary Level) The Reuse Plant (with Tertiary Treatment) have to meet following criteria for the treated effluent Parameter / Unit / Specified Maximum Concentration Turbidity / NTU / < 2 TDS / mg/l / < 1000 TN / mg/l / < 5 BOD / mg/l / < 5 COD / mg/l / < 30 TP / mg/l / < 1 Fecal Coliform / mg/l / NIL	The technology proposed for tertiary treatment is ultrafiltration process. As per tender, the bidder needs to have experience in Reuse Plants with the total Nitrogen Guarantee of < 5 mg/L . However in reuse plants using treated sewage, TN guarantee of < 5 mg/L cannot be guaranteed after Ultra-Filtration Systems ; since total nitrogen removal in Ultrafiltration Systems will be incidental to the removal of Suspended solids. Hence we request you to allow TN guarantee at outlet of Tertiary Treatment Plant as < 10 mg/L or As Arising for experience criteria. Please confirm.	Refer Addendum-1

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<table>
<tr><th>Sr. No.</th><th>Vol.No. / Pg. No.</th><th>Description</th><th>Query</th><th>Reply</th></tr>
<tr><td>103</td><td>SECTION 2, INSTRUCTIONS TO TENDERERS (ITT)
Page 14 of 236</td><td>3.1.2. (b)(ii)
Construction Experience- Reuse Plant (with Tertiary Level)

The Reuse Plant (with Tertiary Treatment) have to meet following criteria for the treated effluent
<table><tr><th>Parameter</th><th>Unit</th><th>Specified Maximum Concentration</th></tr><tr><td>Turbidity</td><td>NTU</td><td>< 2</td></tr><tr><td>TDS</td><td>mg/l</td><td>< 1000</td></tr><tr><td>TN</td><td>mg/l</td><td>< 5</td></tr><tr><td>BOD</td><td>mg/l</td><td>< 5</td></tr><tr><td>COD</td><td>mg/l</td><td>< 30</td></tr><tr><td>TP</td><td>mg/l</td><td>< 1</td></tr><tr><td>Fecal Coliform</td><td>mg/l</td><td>NIL</td></tr></table></td><td>As per tender, the bidder needs to have experience in Reuse Plants with the TDS Guarantee of < 1000 mg/L . TDS guarantee is provided in reuse plants having RO treatment systems. Since the technology proposed for tertiary treatment for this tender is ultrafiltration process which cannot remove TDS, kindly delete the experience criteria for TDS or allow TDS values as “As Arising”.
Please confirm.</td><td>Refer Addendum-1</td></tr>
<tr><td>104</td><td>TSPS &WwTPs Design / Sizing Criteria
Part 5-33
&
Part 5-68</td><td>TREATED EFFLUENT QUALITY REQUIREMENTS FOR REUSE (APPLICABLE AS SPECIFIED)
<table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Saulkere</th></tr><tr><td>TN</td><td>mg/l</td><td>< 5</td></tr></table>&

Reuse Facilities:
<table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Saulkere</th></tr><tr><td>Membrane Pore Size</td><td>-</td><td>0.01 – 0.03 microns to remove suspended solids, bacteria and viruses</td></tr></table></td><td>The technology proposed for tertiary treatment is ultrafiltration process as per tender. Ultrafiltration membranes are designed to remove suspended solids, bacteria and viruses ; also mentioned in Part 5-68. Hence Nitrogen removal in Ultrafiltration Systems will be incidental to the removal of Suspended solids and cannot be guaranteed.
Hence we request you to allow Total Nitrogen Removal guarantee at outlet of Tertiary Treatment Plant after Ultrafiltration as < 10 mg/L or As Arising .
Please confirm.</td><td>The design effluent quality requirement for Reuse shall be as defined in the tender document.</td></tr>
<tr><td>105</td><td>TSPS &WwTPs Design / Sizing Criteria
Part 5-33
&
Part 5-68</td><td>TREATED EFFLUENT QUALITY REQUIREMENTS FOR REUSE (APPLICABLE AS SPECIFIED)
<table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Saulkere</th></tr><tr><td>TDS</td><td>mg/l</td><td>< 1000</td></tr></table>&

Reuse Facilities:
<table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Saulkere</th></tr><tr><td>Membrane Pore Size</td><td>-</td><td>0.01 – 0.03 microns to remove suspended solids, bacteria and viruses</td></tr></table></td><td>The technology proposed for tertiary treatment is ultrafiltration process as per tender. Ultrafiltration membranes are designed to remove suspended solids, bacteria and viruses ; also mentioned in Part 5-68. Hence the incoming TDS shall pass unobstructed through the Ultrafiltration membrane. TDS outlet of <1000 mg/l can be guaranteed as long as the incoming TDS to Ultrafiltration Unit is < 1000 mg/L.
Hence we request you to delete the guarantee for TDS or allow TDS guarantee at outlet of Tertiary Treatment Plant as “As Arising ” .
Please confirm.</td><td>Tender Conditions Prevails.
TDS at outlet of <1000 mg/L can be guaranteed as long as the influent sewage TDS is < 1000 mg/L.</td></tr>
</table>

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
106	TSPS &WwTPs Design / Sizing Criteria Part 5-68	Reuse Facilities: Item/Parameter/Description | Units | WwTP at Saulkere Reuse Flow | MLD | 14	We Assume that Reuse Flow means flow at outlet of Ultrafiltration Plant (Permeate Flow). Please confirm.	Refer Addendum-1
107	TSPS &WwTPs Design / Sizing Criteria Part 5-68	Reuse Facilities: Item/Parameter/Description | Units | WwTP at Saulkere No of Membrane Trains | Nos | 5	The terminology of membrane "trains" is applicable to Pressurised ultrafiltration systems and not to Submerged ultrafiltration systems; since the membrane modules are immersed in tanks or cells. Hence we assume that trains mentioned in the specified clause shall refer to "cells or tanks" for Submerged ultrafiltration systems . Also, the number of tanks or cells shall be as per the recommendation of UF vendor.	Tender Conditions Prevails. Tender conditions calls for minimum requirement.
108	TSPS &WwTPs Design / Sizing Criteria Part 5-68	Reuse Facilities: Item/Parameter/Description | Units | WwTP at Saulkere No of Feed Pump/Permeate Pump (Working) | Nos | 4 Capacity of each feed pump / permeate pump | m^3/hr | 175	The tender specifies number of Working Feed Pumps/Permeate Pump to be 4 Nos. The Number of Working Pumps can be more or less as per UF vendor design and type of UF – submerged /pressurised . Hence please allow the number and capacity of Feed Pump/Permeate Pump to be as per UF vendor recommendation.	Tender Conditions Prevails. Tender conditions calls for minimum requirement.
109	TSPS &WwTPs Design / Sizing Criteria Part 5-68	Reuse Facilities: Item/Parameter/Description | Units | WwTP at Saulkere Minimum UF Plant Recovery | % | 95	Maximum Recovery possible through UF systems is ~ 93-94 %. Extra Recovery is achieved only through additional UF backwash recovery systems that will treat the UF Backwash Waste and make it available for reuse. Since surplus flow is available at the inlet of UF plant, we request you to allow minimum recovery of 93 % for UF plants. Please confirm.	Refer Addendum-1
110	TSPS &WwTPs Design / Sizing Criteria Part 5-68	Reuse Facilities: Item/Parameter/Description | Units | WwTP at Saulkere Membrane Pore Size | - | 0.01 – 0.03 microns to remove suspended solids, bacteria and viruses	Ultrafiltration Porosity ranges from 0.01 to 0.07 microns with most of the industry adopting for 0.04 microns as the nominal size. Therefore, we request you to allow 0.04 microns nominal pore size for UF membrane . Kindly confirm.	Refer Addendum-1
111	TSPS &WwTPs Design / Sizing Criteria Part 5-68 & 8.18.16 Ultra Filtration System (Submerged/ Pressurized) Part 8-111	Reuse Facilities: Item/Parameter/Description | Units | WwTP at Saulkere Membrane Material (MOC) | - | Poly-Vinyli-Dene-Fluoride (PVDF) reinforced with polyester or polypropylene backing layer. & K. PVDF Membrane with Braided The membrane fiber features a Braided PVDF membrane formulation cast on polyester support braid.	PVDF Reinforced with polyester is not required for submerged ultrafiltration systems that operate on lower pressures than Pressurised UF systems. Hence please allow the bidder to provide more superior monolithic membranes made up of 100 % PVDF for submerged ultrafiltration system that have the following advantages □ More Efficient than braided PVDF membranes as the PVDF layer tends to pe off during operation leading to loss of functionality □Longer Membrane Life over braided-PVDF membrane □More Reliable □Lesser Chemical Consumption as compared to braided PVDF Please confirm.	Refer Addendum-1

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
112	TSPS &WwTPs Design / Sizing Criteria Part 5-68	Reuse Facilities: Item/Parameter/Description | Units | WwTP at Saulkere Membrane Type | - | Submerged (out-to-in) or Pressurized (outside-in or inside-out) hollow fiber membranes, designed to handle peak plant flow conditions.	The tender specifies that the ultrafiltration system needs to be designed to handle peak plant flow conditions. However as per tender, UF feed pumps of required capacity shall pump water to the ultra-filtration system in order to generate 14 MLD of permeate flow. Hence we assume that peak plant flow conditions are not applicable for design of ultrafiltration system. Please confirm.	Refer Addendum-1
113	TSPS &WwTPs Design / Sizing Criteria Part 5-68	Reuse Facilities: Item/Parameter/Description | Units | WwTP at Saulkere Maximum Membrane Flux rate | - | 30 LMH	The Maximum membrane flux mentioned in tender i.e. 30 LMH is applicable for MBR systems that operate under high solids load (>5000 mg/L) For UF systems that treat secondary treated waste water the solids load will rarely exceed 20 mg/L . In such a case , lower flux is not required and will result in substantial increase in capital cost without any significant benefit to the client. Hence we request you to allow Average Membrane Flux rate to be ≤ 40 LMH. Please confirm.	Tender Conditions Prevails.
114	TSPS &WwTPs Design / Sizing Criteria Part 5-69	Reuse Facilities: Item/Parameter/Description | Units | WwTP at Saulkere UF Membrane design load factor (on BOD and TSS) | - | 2	Please confirm that load factor for UF membrane design refers to design safety on inlet parameters to UF system. Also, since UF membranes are designed for suspended solids removal, the design safety or load factor of two shall only be applicable on inlet TSS values to UF System. Please confirm.	Tender Conditions Prevails.
115	8.18.16 Ultra Filtration System (Submerged/ Pressurized) Part 8-107	D. Working Principle of Submerged UF Process: After mechanical pretreatment, the wastewater is fed to the membrane tanks where the water is separated from the solids by the SUF membranes. The liquid is typically fed below the submerged membrane modules.	We assume that bidder can provide rotary drum screens as mechanical pre-treatment for submerged ultrafiltration process. Please confirm.	Tender Conditions Prevails. It is after Disc filtration system only.
116	8.18.16 Ultra Filtration System (Submerged/ Pressurized) Part 8-110	I.Single Header Design • The SUF product consists of bundles of hollow fiber membranes potted only at the lower end of each bundle. The non-potted ends of the fibers (at the top of the bundle) are individually sealed and move freely in the liquid.	The tender specifies that the submerged ultrafiltration system shall have single header design. However the problems associated with double header design are only observed in MBR systems due to the presence of fibrous material and high amount of MLSS in MBR tanks. Both of the issues are not present in treated sewage. Double header designs are more efficient since it allows for uniform withdrawal of water from the modules. Hence please allow the bidder to offer submerged ultrafiltration header design as per the UF manufacturer recommendation / design. Please confirm.	Refer Addendum-1
117	8.18.16 Ultra Filtration System (Submerged/ Pressurized) Part 8-113	Technical Particular | Parameters Spare Space for module per train | | 10 %	We understand that for submerged UF system "train" shall refer to "cell/tank" and 10 % spare space for module shall be provided per "cell/tank". Kindly confirm.	Refer Addendum-1

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
118	8.18.16 Ultra Filtration System (Submerged/ Pressurized) Part 8-113	<table><tr><td>Technical Particular</td><td>Parameters</td><td></td></tr><tr><td>Minimum Operating Life of Membrane</td><td>Years</td><td>10</td></tr></table>	The minimum operating life of membranes depends upon various factors , type of system , vendor etc. and typically ranges from 5 years for Pressurised Ultrafiltration system to 7 years for submerged ultrafiltration system. Hence we request you to allow the bidder to provide Minimum Operating Life of Membrane as 7 years. Please confirm.	Tender Conditions Prevails.
119		General & Technical Qualification of Tenderer required in last 05 years.	We kindly request you to consider General & Technical Qualification in Last 07 years. As in all other government and semi government organization last 07 years is allowed for similar type of major projects	Not Acceptable Tender Conditions Prevails
120		(i) Experience in Execution of WwTPs i. The Tenderer as a sole entity or a lead partner and or partner in a joint venture shall have successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing and Commissioning of all Civil, Mechanical, Electrical and Instrumentation works of minimum One (1) No. WwTP of 12 MLD capacity and above or Two (2) Nos. Waste Water Treatment Plants of minimum 6 MLD capacity with Biological Nutrient Removal (BNR) technology of process like A2O, EA, IFAS, MBBR, SBR with SCADA Integration to meet effluent standard as BOD < 10 mg/L, COD < 50 mg/L, TSS < 10 mg/L, TN < 10 mg/L, TP < 1 mg/L and fecal coliform < 100MPN/100ml should be in operation for a period of one year during the last 5 years as on date of Bid submission	As per the NGT norms the Total Suspended Solid (TSS) value should be TSS < 20 mg/L, hence we kindly request to consider TSS < 20 mg/L instead of TSS < 10 mg/L (In-support of this we are accompanying order copy of the National Green Tribunal Principal Bench, New Delhi date of hearing 30.04.2019)	Refer Addendum-1
121	Vol-I & SECTION 2: INSTRUCTION S TO TENDERERS (ITT)	The tenderer as a sole entity or a Lead Partner and or Partner in a Joint Venture shall have successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical. Electrical, and Instrumentation Works of minimum One(1) No.WwTPof16MLDcapacityand above or Two (2) Nos. of Waste water Treatment Plants of minimum 08 MLD capacity with Biological Nutrient Removal (BNR) technology of process like , A2O, EA, IFAS, MBBR, SBR, with SCADA Integration, to meet effluent standard as BOD ≤ 10 mg/L, COD ≤ 50 mg/L, TSS ≤ 10 mg/L, TN ≤ 10 mg/L, TP ≤ 1 mg/L and fecal coliform<100MPN/100ml and should be in operation for a period of one year during the last 5 years as on date of Bid submission.	As the tender inviting authority asked this qualifying requirement in last 5 financial years we are requesting to kindly consider the same in last 7 years	Not Acceptable. Tender Conditions Prevails.
122	Vol-I & SECTION 2: INSTRUCTION S TO TENDERERS (ITT)	(ii) Construction Experience- Reuse Plant (with Tertiary Level) The tenderer as sole entity or lead partner and or partner in a joint venture shall provide evidence that it has successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of minimum One (1) No. and above reuse plant of0 8MLD or Two (2) Nos.of reuse plant(with Tertiary Treatment)of minimum 4 during the last 5 years as on date of Bid submission. The Reuse Plant (with Tertiary Treatment) have to meet following criteria for the treated effluent Parameter Unit Specified Maximum Concentration Turbidity NTU<2.0 TDS mg/L < 1000 TN mg/L < 5.0 BOD mg/L < 5.0 CODmg/L<30.0 TP mg/L < 1.0 Fecal Coliform MPN/100ml Nil	We have referred the required parameters of the treated water as in Vol-II Sec-7 Page 15, as the treated water will be required for the lakes and as per Order Dated 18.12.2023 by the Ministry of Housing & Urban Affairs Annexure-I, the following parameters are recommended for non-contact impoundments(tanks &lakes etc.). As the degree of treatment of tertiary treated sewage is dependent on the usage, hence we request to consider the experience of tertiary filtration without mandating the parameters as which are exclusively dependent on use of treated sewage.	Not Acceptable. Tender Conditions Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
123	Volume-2 / Section-7, Part 5 - 32	Influent Wastewater Characteristics pH — 6.5-7.5 BOD — mg/L — 350 COD — mg/L — 800 TSS — mg/L — 450 VSS — mg/L — 360 TKN — mg/L — 70 NH4-N — mg/L — 45 Total Phosphorus — mg/L — 7	As per the clause referenced in the tender document, the BOD value of 350 mg/L corresponds to a COD of 800 mg/L, which indicates a relatively high COD/BOD ratio. Typically, as per CPHEEO guidelines, a BOD of 250 mg/L with a COD of 425 mg/L is considered standard. We assume that the sewage does not contain any industrial effluent and that the COD is primarily biodegradable. Kindly confirm	The design influent parameters requirement shall be as defined Part 5, Volume 2/ Section 7, "TSPS & WwTPs Design / Sizing Criteria".
124	Volume-2 / Section-7, Part 5 - 32	Influent Wastewater Characteristics COD — mg/L — 800	We presume that there is no ingress of industrial effluent in the sewage, and that more than 95% of the COD is biodegradable, with less than 5% being non-biodegradable. Alternatively, the treated effluent COD performance requirements may be considered for relaxation, provided the Contractor can demonstrate that a portion of the influent COD is non-biodegradable and cannot be removed using the existing treatment processes at the Works. Kindly confirm.	Bidder may consider Non-biodegradable COD as per the bidder design.
125	Volume-1 / Page 15 of 236	**Construction Experience- Pipeline** The tenderer must have experience in the role of Prime Contractor (Single entity or JV member)/Management Contractor for procurement and construction of pipeline (DWC/RCC/DI) with a minimum diameter of 200mm & above in any one year during the last 5 years as on date of bid submission involving minimum length of 12 Km.	We would like to bring to your attention that only a limited number of bidders are currently able to qualify under the existing criteria. The specific requirements, particularly regarding the construction experience, are preventing several competent bidders from meeting the overall qualification standards. In light of this, we respectfully request that you consider permitting bidders to submit a Memorandum of Understanding (MoU) with a specialist subcontractor who meets the required qualifications. We believe this approach would promote fair competition and enable capable teams to participate more effectively. Kindly confirm	Not Acceptable. Tender Conditions Prevails.
126	Volume-1 / Page 15 of 236	(vi) Construction Experience Trenchless Works The Tenderer must have experience in the role of Prime Contractor (Single entity or JV member)/Management Contractor for executing trenchless work 600mm dia. and above MS casing pipe of minimum 100 meters in any one year during the last 5 year as on date of bid submission.	We would like to bring to your attention that only a limited number of bidders are currently able to qualify under the existing criteria. The specific requirements, particularly regarding the construction experience, are preventing several competent bidders from meeting the overall qualification standards. In light of this, we respectfully request that you consider permitting bidders to submit a Memorandum of Understanding (MoU) with a specialist subcontractor who meets the required qualifications. We believe this approach would promote fair competition and enable capable teams to participate more effectively. Please confirm.	Not Acceptable. Tender Conditions Prevails.

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NAME OF PROJECT : DESIGN, ENGINEERING, CONSTRUCTION AND COMMISSIONING OF WASTEWATER TREATMENT PLANTS WITH TERTIARY TREATMENT FACILITY, AND INTERMEDIATE SEWAGE PUMPING STATION ALONG WITH OPERATION & MAINTENANCE THEREOF FOR TEN YEARS [WORKS - A] AND PROCUREMENT AND CONSTRUCTION OF RISING MAIN, MAIN SEWERS AND LATERALS INCLUDING MACHINE HOLES AND LIFT SEWAGE PUMPING STATIONS [WORKS – B] HYBRID MODE FOR BOMMANAHALLI ZONE IN 110 VILLAGE AREAS (Phase II) UNDER KARNATAKA WATER SECURITY AND DISASTER RESILIENCE PROGRAM (KWSDRP) – (Contract Package No. BWSSB CE-P/KWSDRP/WBS-IV)

Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
127	Volume-1 / Page 16 of 234	Technology provider shall provide the evidence that he has successfully supplied the technology for at least 1 (One) WWTP same as 3.1.2 (b)(i) **3.1.2. (b) (i) Experience in Execution of WwTPs** The Tenderer as a sole entity or a Lead Partner and or Partner in a Joint Venture shall have successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of minimum One (1) No. WwTP of minimum 4 MLD capacity and above, with Biological Nutrient Removal (BNR) technology of process like, A2O, EA, IFAS, MBBR, SBR, with SCADA Integration, to meet effluent standard as BOD ≤ 10 mg/L, COD ≤ 50 mg/L, TSS ≤ 10 mg/L, TN ≤ 10 mg/L, TP ≤ 1 mg/L and fecal coliform<100MPN/100ml and should be in operation for a period of One year during the last 5 years as on date of Bid submission.	As per the Tender document, the Technology Provider is required to demonstrate that they have successfully supplied the specified technology for at least one Wastewater Treatment Plant (WWTP), as outlined in clause 3.1.2 (b)(i). We understand that this clause refers to the effluent quality at the final discharge point of the Sewage Treatment Plant (STP), rather than immediately following the secondary treatment stage. Accordingly, to demonstrate compliance, the Technology Provider for the secondary treatment system must ensure that the final treated effluent meets the following parameters, as specified— excluding fecal coliform: • BOD ≤ 10 mg/L • COD ≤ 50 mg/L • TSS ≤ 10 mg/L • Total Nitrogen (TN) ≤ 10 mg/L • Total Phosphorus (TP) ≤ 1 mg/L Please confirm.	Refer Addendum-I
128	Volume-1 / Page 14 of 236	Technology provider shall provide the evidence that he has successfully supplied the technology for at least 1 (One) WWTP same as 3.1.2 (b)(i)	As per the Tender document, the Technology Provider must submit evidence of having successfully supplied the technology for at least one (1) wastewater treatment plant (WWTP), in accordance with Clause 3.1.2(b)(i). We observe that the clause does not clearly specify the required capacity of the reference WWTP. However, it is our understanding that the Technology Provider is expected to demonstrate experience in supplying the technology for at least one (1) WWTP of 4 MLD capacity, as per the intent of Clause 3.1.2(b)(i). Please confirm.	Refer Addendum 1
129	Volume-2 / Section-7, Part 5 - 58	N-1 condition: - The Bidder shall provide calculations for operating the WwTP at Design Flow with 1 SBR tank offline for maintenance.	In the earlier BWSSB tender—specifically the CP25 package and the 10 MLD STP at Jakkur, which adopted SBR technology—this particular clause was omitted. We presume that a similar approach will be adopted for the current tender as well. Please confirm.	Tender Conditions Prevails
130	Volume-2 / Section-7, Part 5 - 59	HRT at average flow: 24 Hrs.	Hydraulic Retention Time (HRT) is a derived parameter based on the selected SBR cycle time and the inlet sewage characteristics. We understand that the HRT should be determined in accordance with the process requirements and the Technology Provider's recommendations to meet the effluent quality standards specified in the tender. Kindly confirm	Tender Conditions Prevails
131	Volume-2 / Section-7, Part 5 - 60	Maximum Decanter Weir loading rate: 120 m3/h/m	In the earlier BWSSB tenders for CP25, CP26, and CP27 packages based on SBR technology, the maximum decanter weir loading rate was specified as 125 $m^3/h/m$ (Addendum-8). We assume that this same rate will be applicable to the current tender as well. Kindly confirm	Tender Conditions Prevails
132	Volume-2 / Section-7, Part 8 - 98	**Decanters (For SBR system)**	We assume that all decanter specifications will be acceptable based on the technology provider's standard specifications, as the bidder is required to submit the technology tie-up agreement in the technical bid. Kindly confirm.	Tenderer or Technology supplier can adopt with his own Patent concept of Decanter Equipment, but has to justify such thickness adopted for the steel member with suitable Structural Analysis Report for the fabricated Steel Structure of Decanter Mechanism.

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133	Volume-2 / Section-7, Part 8 - 98	**Decanters (For SBR system)** All the withdrawal SS 316L Pipes shall be of thickness not less than Schedule 20S above 200 mm and Schedule below 200 mm shall be of Schedule 40S, and all the pipes shall be of Seamless type only.	It is presumed that the decanter mechanism forms an integral part of the technology components. Additionally, the bidder is required to submit the Technology Tie-Up Agreement as part of the technical bid. Accordingly, the pipe schedule(s) mentioned under the decanter specifications shall not be applicable to the decanter system. Kindly confirm	Tenderer or Technology supplier can adopt with his own Patent concept of Decanter Equipment, but has to justify such thickness adopted for the steel member with suitable Structural Analysis Report for the fabricated Steel Structure of Decanter Mechanism.
134	Volume-2 / Section-7, Part 5 - 62	**8. Process Air Blowers** α: Oxygen Transfer Correction Factor - 0.6 β: Salinity - Surface Tension Correction Factor - 0.95 F: Fouling Factor - 0.8	The factors provided in the tender document—Alpha, Beta, and the Fouling Factor—are dependent on the type of diffuser, material of construction (MoC), and self-cleaning capacity, which can vary within the range specified in the latest edition of Metcalf and Eddy. Therefore, we assume that these factors can be considered in accordance with the latest edition of Metcalf and Eddy for designing the aeration system. Kindly confirm.	Tender Conditions Prevails
135	Volume-2 / Section-7, Part 8 - 82 to Part 8 -85 Volume-2 / Section-7, Part 8 -100 to Part 8 -101	8.18 Aeration system with allied Equipments 8.18.1 Tubular Type Diffusers & 8.18.15.2 Diffuser system for IFAS 8.18.15.3 Type of Diffuser System 8.18.15.4 Diffuser Elements 8.18.15.5 Testing for Diffuser system 8.18.15.6 Air Piping to Diffusers	The Tender document specifies two different diffuser specifications as outlined in the referenced clause. We understand that the diffuser specifications provided in Clause 8.18.15.2 to 8.18.15.6 are applicable to the aeration system for all secondary treatment processes where diffused aeration is used. Kindly confirm.	Diffuser specification shall be as per Cl.no.8.18.1 only and Cl.no. 8.18.15.2 to 8.18.15.6 stands deleted Refer Addendum-1
136	Volume-2 / Section-7, Part 8 - 90	<table><tr><th>Sl.no.</th><th>Description</th><th>Material of Construction</th></tr><tr><td>f</td><td>Acoustic enclosure</td><td>Al-Zn coated steel, insulated with glass wool</td></tr></table>	Recently, various materials of construction (MOC) for acoustic enclosures for turbo air blowers have become available. We kindly request permission for the tenderer to provide an acoustic enclosure for the turbo blower based on the manufacturer's standard MOC. Kindly confirm.	Superior material than specified in the tender can be adopted with justification and without any cost implication to BWSSB.
137	Volume-2 / Section-7, Part 8 - 161	**40 Disc Filtration System** List of Approved Suppliers: Manufacturer for Disc Filter: M/s Hydro Tech M/s Xylem M/s Estragua M/s Jash Invent M/s Huber M/s Aqua Aerobics M/s Evoqua water Technologies	M/s Yucheon has been accepted as a disc filter supplier in several previous BWSSB tenders, including the STP packages of CP-25, 26 and 27, 10 MLD STP at Jakkur, 10 Komaghatta, 13 MLD Byrathi Kanne. Therefore, we assume that the tenderer can propose M/s. Yucheon Fiber Disc Filter for this tender. Kindly confirm.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
138	Volume-2 / Section-7, Part 5 - 65	**DISC FILTER** Design flow per unit: Designed for 100% Peak Flows including recycle flows - Irrespective process	We understand that the design flow for the disc filter unit should be based on the maximum incoming flow to the unit. In the case of the SBR system, the FDF unit should be designed based on the average flow or the decant flow, whichever is higher. Kindly confirm.	Tender Conditions Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
139	Volume-2 / Section-7, Part 1 - 11 Volume-2 / Section-7, Part 5-32	<table><tr><th>Parameters</th><th>Unit</th><th>Value</th></tr><tr><td colspan="3">TREATED EFFLUENT QUALITY REQUIREMENTS - DISCHARGE</td></tr><tr><td>pH - Instantaneous range</td><td>-</td><td>6.5-8.0</td></tr><tr><td>BOD_3 at 20°C - Maximum monthly average</td><td>mg/L</td><td>10</td></tr><tr><td>COD - Maximum monthly average</td><td>mg/L</td><td>50</td></tr><tr><td>TSS - Maximum monthly average</td><td>mg/L</td><td>10</td></tr><tr><td>TN - Maximum monthly average</td><td>mg/L</td><td>10</td></tr><tr><td>Total Phosphorus - Maximum monthly average</td><td>mg/l</td><td>1</td></tr><tr><td>Residual Chlorine - Instantaneous</td><td>mg/L</td><td>1</td></tr><tr><td>Fecal Coliform – Maximum Monthly average</td><td>MPN/100 mL</td><td>100</td></tr><tr><td>Fecal Coliform – Ceiling Limit (in any day)</td><td>MPN/100 mL</td><td>230</td></tr></table>	As per the tender document, the treated effluent quality parameters such as BOD, COD, TSS, TN, and TP are expected to be achieved at the outlet of the biological treatment process (e.g., SBR). Therefore, a Disc Filter is not required solely to meet these parameters. Accordingly, we understand that the provision of a Disc Filter shall be based on the process requirement. Kindly confirm.	Tender Conditions Prevails.
140	Volume-2 / Section-7, Part 8 - 136	Disc Filter	The specifications provided for Disc Filters appear to be specific to a particular vendor and are aligned with the offerings of only one or two vendors listed in the approved vendor list. Accordingly, we understand that the Disc Filter specifications shall be deemed acceptable as per the approved vendor's standard design. Kindly confirm	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
141	Volume-2 / Section-7, Part 8 - 138	Filter Membrane: Stainless steel screen / Mesh: SS-316L	In previous BWSSB tenders, Polyester filter cloth or SS 316 with 10 microns mounted on a Poly Propylene Glass/ABS frame was allowed in previous tenders like 10 MLD Komaghatta, 13 MLD Bairathi Khanne & CP-25, 26 & 27. Hence, we assume that the tenderer can also provide filter membranes made from polyester cloth or SS316 material for this tender. Kindly confirm	Tender Conditions Prevails.
142	Volume-2 / Section-7, Part 8 – 137	….. the automatic valve and suction cleaning pump which shall be	This type of arrangement was not mentioned in several BWSSB tenders, such as the 10 MLD Komaghatta, 13 MLD Bairathi Khanne & CP-25, 26 & 27. Therefore, we understand that this arrangement should also be acceptable for the current tender.	For automatic Backwash operation this valve is suggested in fully submerged Disc filters, tenderer can follow alternative arrangement as per vendor recommendation, considering auto operation system of Backwashing based on clogging alarm.
143	Volume-2 / Section-7, Part 8 - 138	Protective Top Cover and Body cover along with frame structure : SS316 (Minimum 4mm for Body cover)	As per the tender document, we are proposing a fully submerged fiber disc filter. This type of filter does not require any covering, shed, or RCC roof. Therefore, we assume that a fully submerged fiber disc filter without a cover will be acceptable. Kindly confirm.	In cl.no. 8.26, Table "Technical Particulars Common for both Partially Submerged or Fully Submerged type Disc Filtration System", Tenderer can consider the specification, based on his design adopted either of two system. RCC structure as defined in the tender document is mandatory for both the system.
144	Volume-2 / Section-7, Part 5 - 65	DISC Filter building	As per the tender document, we are proposing a fully submerged fiber disc filter. This type of filter does not require any covering, shed, or RCC roof. Therefore, we assume that a fully submerged fiber disc filter without a roof will be acceptable. Kindly confirm	Tender Conditions Prevails.
145	Volume 2, Page no. TECHNICAL SCHEDULE X FUNCTIONAL GUARANTEES OF THE PLANT, Page no. Technical Schedule X- 2	**a) Energy Consumption for TSPS, WwTP with Reuse** PCA = [{PCD}*{(0.42*QA/QD)+(0.24*BA/BD)+(0.24*TA/TD)+(0.1*NA/ND)}] **a) Energy Consumption for TSPS, WwTP without Reuse** PCA = [{PCD}*{(0.4*QA/QD)+(0.24*BA/BD)+(0.24*TA/TD)+(0.1*NA/ND)}]	The specified formula for energy consumption is not applicable in the case of the Terminal Sewage Pumping Station (TSPS), as energy usage in this context is based on the volume of sewage pumped rather than on pollutant load parameters such as BOD, TSS, or TKN. Accordingly, we understand that the formula provided for calculating energy consumption for the Intermediate Sewage Pumping Station (ISPS) should also apply to the TSPS. Kindly confirm.	Tender Conditions Prevails.

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146	Volume-2 / Section-7, Part 5 - 63	ALUM DOSING SYSTEM (FOR ALL TREATMENT PROCESSES)	As stated in the tender, an alum dosing system is required for chemical phosphorus removal. However, we assume that if the Total Phosphorus ≤ 1 mg/L, as specified in the tender, is achieved biologically through the Biological Nutrient Removal process, then the alum dosing system will not be necessary. Therefore, the alum dosing system should be considered optional and provided only if required, based on the process requirements to achieve Total Phosphorus ≤ 1 mg/L. Kindly confirm	Tender Conditions Prevails.
147	Volume-2 / Section-7, Part 3-13 & 3-14	**3.16.4 Bid Drawings and Details** (a) General and Process. (b) Mechanical (c) Electrical & Instrumentation	The tender specifies a large number of documents for submission. It is not feasible to submit all these documents at the bidding stage. We understand that the submittals under the categories a) General and Process shall be provided during the bidding stage, while all other documents will be submitted after the award of the contract. Kindly confirm	The Tenderer shall submit all the document specified under the clause 3.16.4 Bid Drawings and Details for (a) General and Process, (b) Mechanical, (c) Electrical & Instrumentation. However, the "To-scale dimensional layout and/or installation drawings" as specified under the clause 3.16.4 (b) Mechanical (i) can be omitted during the bidding stage. However, Tenderer shall provide a undertaking for non-submission.
148	Volume – 4 Drawings	**Proposed Plot Plan**	We kindly request that the proposed plot plan be provided in AutoCAD format.	Refer Addendum-1
149	Volume-2 / Section-7, Part 5 - 43 Volume-2 / Section-7, Part 5 - 49 Volume-2 / Section-7, Part 5 -	**SECONDARY CLARIFIERS (EA PROCESS)** **SECONDARY CLARIFIERS (IFAS PROCESS)** **SECONDARY CLARIFIERS (MBBR PROCESS)**	The tender states that the bidder must provide calculations for operating the WWTP at design flows with one tank/unit/module offline for maintenance. We assume that this requirement also applies to secondary clarifiers. Kindly confirm.	Tender Conditions Prevails.
150	Volume-2 / Section-7, Part 7 - 54	PLC shall be provided as a Hot Stand-by Controller	We understand that a redundant PLC system has been specified to prevent extended interruptions in plant operations and control. Alternatively, the same level of reliability can be ensured by using a standard non-redundant PLC system, supported by pre-programmed spare components such as CPU, power supply, etc. In the unlikely event of a PLC failure, the system can be restored within 1–2 hours using these spares. Kindly confirm whether a non-redundant PLC with essential pre-programmed spares is acceptable.	Not Acceptable.The Plant master controller station shall be provided with two identical central processors configured such that they operate in Hot-Standby mode.The system shall be designed and implemented such that when the Main processor fails, the Standby one shall automatically take over. The changeover shall be seamless, smooth and without any time delay and this Hot-Standby feature is to be proposed for WwTP SCADA control room as per Clause No.13.27, Part-13, Volume-2 of the Tender Document. Hence, the Tender Condition Prevails.
151	Volume 2/Section 7, Part 7-54 & part 7-56	7.13.1 Redundant SCADA Dual redundant SCADA system and Historian software Operator work Station, loaded with Runtime SCADA Server SCADA Operator work station with licensed SCADA software SCADA Engineering work station with licensed SCADA software	The operators available at the STP are generally not trained to carry out programming or modifications in the SCADA system, and allowing them to do so may pose operational risks. SCADA modifications require expert programmers who possess the necessary licenses and skills. Therefore, we kindly request that only runtime software for SCADA be considered. Kindly confirm.	Not Acceptable. The PLC cum SCADA softwares capable of modification on Control System Logic updation cum SCADA Screen Graphics during run time without any impact on WwTP Process. The Control Logic & SCADA Graphics screens tested & witnessed during Factory Acceptance Test (FAT) at authorized Original Equipment Manufacturer's (as per approved OEMs list in Part-13) workshop and PLC Logics cum SCADA Graphics Screens in line with approved Plant Operational control philosophy prior to dispatch to site as per Clause No. 14.19.B, Part-14 of tender document. Hence, the critical logic updations are not allowed at site only minor modifications shall be updated through authorized licensed programmer of original equipment manufacturer's for which necessary training provided by authorized licensed programmer to the O&M team as per Clause no.15.1.6, Part-15 in tender document. The SCADA shall be a fully dual redundant microprocessor based computer system such that reliable and fully automatic plant control can be achieved by using Hot-Standby PLC system. The SCADA software functions are to be complied as per clause nos.13.27,13.34 & 13.35, Part-13 in Volume-2 of the tender document. Hence, the Tender Conditions Prevails.

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152	Volume-2 / Section-7, Part 7 - 56	Historian Software	As alarms and trends are already stored within the computer based SCADA system, which includes an inbuilt SQL server, a separate historian system is not necessary. Therefore, we request you to consider a PLC and SCADA system without the requirement for a separate historian. Kindly confirm	Not Acceptable. In addition with Redundant SCADA system,the Historian software system shall be designed and configured to store data for a minimum of seven years data retrieval as per Clause No.7.13.4, Part-7 in Volume-2 of the tender document. Hence, the Tender Conditions Prevails.
153	SECTION 2, INSTRUCTIONS TO TENDERERS (ITT) Page 14 of 236	3.1.2. (b)(ii) Construction Experience- Reuse Plant (with Tertiary Level)---	The proposed tertiary treatment technology is the ultrafiltration (UF) process. Given that the UF system is a critical component of the TTP and that the overall system guarantee is closely tied to membrane design and technology, it should be mandatory for the bidder to enter into a tie-up with a qualified membrane supplier. Accordingly, we propose the following qualification requirement: "The bidder must establish a tie-up with the ultra-filtration membrane supplier or its authorized distributor and submit a Technology Tie-up Agreement as part of the technical bid. The membrane supplier or its authorized distributor must have experience in supplying the proposed ultrafiltration system for at least one (1) tertiary treatment plant of minimum 17.5 MLD capacity (net output) in India for any State/Central Government organization or ULB, which has been operational and performing satisfactorily for a minimum of two years as of the tender calling date. A performance certificate from the end user, certified by an officer not below the rank of Executive Engineer, must be submitted." Kindly confirm	Not Acceptable. Tender Conditions Prevails.
154	SECTION 2, INSTRUCTIONS TO TENDERERS (ITT) Page 14 of 236	3.1.2. (b)(ii) Construction Experience- Reuse Plant (with Tertiary Level) The Reuse Plant (with Tertiary Treatment) have to meet following criteria for the treated effluent Parameter / Unit / Specified Maximum Concentration Turbidity / NTU / < 2 TDS / mg/l / < 1000 TN / mg/l / < 5 BOD / mg/l / < 5 COD / mg/l / < 30 TP / mg/l / < 1 Fecal Coliform / mg/l / NIL	The proposed technology for tertiary treatment is ultrafiltration. As per the tender, bidders are required to have experience in reuse plants with a Total Nitrogen (TN) guarantee of < 5 mg/L. However, in reuse plants using treated sewage, a TN guarantee of < 5 mg/L cannot be ensured after the ultrafiltration process. This is because total nitrogen removal in ultrafiltration systems is incidental to the removal of suspended solids. Therefore, we kindly request that the TN guarantee requirement at the outlet of the tertiary treatment plant be adjusted to < 10 mg/L or as arising from the experience criteria. Kindly confirm.	Refer Addendum-1
155	SECTION 2, INSTRUCTIONS TO TENDERERS (ITT) Page 14 of 236	3.1.2. (b)(ii) Construction Experience- Reuse Plant (with Tertiary Level) The Reuse Plant (with Tertiary Treatment) have to meet following criteria for the treated effluent Parameter / Unit / Specified Maximum Concentration Turbidity / NTU / < 2 TDS / mg/l / < 1000 TN / mg/l / < 5 BOD / mg/l / < 5 COD / mg/l / < 30 TP / mg/l / < 1 Fecal Coliform / mg/l / NIL	As per the tender, bidders are required to have experience with reuse plants that meet a Total Dissolved Solids (TDS) guarantee of < 1000 mg/L. However, TDS removal is typically achieved in reuse plants with Reverse Osmosis (RO) systems. Since the technology proposed for tertiary treatment in this tender is ultrafiltration, which does not remove TDS, we kindly request the deletion of the TDS experience criteria or that the TDS values be considered as "As Arising." Kindly Confirm.	Refer Addendum-1

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156	TSPS & WwTPs Design / Sizing Criteria Part 5-33 & Part 5-68	**TREATED EFFLUENT QUALITY REQUIREMENTS FOR REUSE (APPLICABLE AS SPECIFIED)** **Item/Parameter/Description** | **Units** | **WwTP at Saulkere** TN | mg/l | < 5 & Reuse Facilities: **Item/Parameter/Description** | **Units** | **WwTP at Saulkere** Membrane Pore Size | - | 0.01 – 0.03 microns **to remove suspended solids, bacteria and viruses**	As per the tender, the proposed technology for tertiary treatment is the ultrafiltration process. Ultrafiltration membranes are designed to remove suspended solids, bacteria, and viruses, as outlined in Part 5-73 / 5-96 of the tender. Therefore, nitrogen removal in ultrafiltration systems is incidental to the removal of suspended solids and cannot be guaranteed. In light of this, we kindly request that the Total Nitrogen removal guarantee at the outlet of the tertiary treatment plant after ultrafiltration be set to < 10 mg/L or considered as "As Arising." Kindly Confirm.	The design effluent quality requirement for Reuse shall be as defined in the tender document.
157	TSPS & WwTPs Design / Sizing Criteria Part 5-33 & Part 5-68	**TREATED EFFLUENT QUALITY REQUIREMENTS FOR REUSE (APPLICABLE AS SPECIFIED)** **Item/Parameter/Description** | **Units** | **WwTP at Saulkere** TDS | mg/l | < 1000 & Reuse Facilities: **Item/Parameter/Description** | **Units** | **WwTP at Saulkere** Membrane Pore Size | - | 0.01 – 0.03 microns **to remove suspended solids, bacteria and viruses**	As per the tender, the proposed technology for tertiary treatment is the ultrafiltration process. Ultrafiltration membranes are designed to remove suspended solids, bacteria, and viruses, as outlined in Part 5-68 of the tender. Therefore, nitrogen removal in ultrafiltration systems is incidental to the removal of suspended solids and cannot be guaranteed. In light of this, we kindly request that the Total Nitrogen removal guarantee at the outlet of the tertiary treatment plant after ultrafiltration be set to < 10 mg/L or considered as "As Arising." Kindly Confirm..	Tender Conditions Prevails.
158	TSPS & WwTPs Design / Sizing Criteria Part 5-68	Reuse Facilities: **Item/Parameter/Description** | **Units** | **WwTP at Saulkere** Reuse Flow | MLD | 14	We assume that the "Reuse Flow" refers to the flow at the outlet of the Ultrafiltration Plant (Permeate Flow). Kindly confirm.	Refer Addendum-1
159	TSPS & WwTPs Design / Sizing Criteria Part 5-68	Reuse Facilities: **Item/Parameter/Description** | **Units** | **WwTP at Saulkere** No of Membrane Trains | Nos | 5	The term "trains" is typically used for pressurized ultrafiltration systems and does not apply to submerged ultrafiltration systems, where the membrane modules are immersed in tanks or cells. Therefore, we assume that in the specified clause, the term "trains" refers to "cells or tanks" for submerged ultrafiltration systems. Additionally, the number of cells or tanks will be as per the recommendation of the UF vendor. Kindly confirm.	Tender Conditions Prevails.
160	TSPS & WwTPs Design / Sizing Criteria Part 5-68	Reuse Facilities: **Item/Parameter/Description** | **Units** | **WwTP at Saulkere** No of Feed Pump/Permeate Pump (Working) | Nos | 4 Capacity of each feed pump / permeate pump | m^3/hr | 175	The tender specifies the number of working feed pumps/permeate pumps as 2 for the Saulkere site. However, the actual number of working pumps may vary based on the UF vendor's design and the type of UF system (submerged/pressurized). Therefore, we request that the number and capacity of feed pumps/permeate pumps be allowed to follow the UF vendor's recommendation. Kindly confirm	Tender Conditions Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
161	TSPS & WwTPs Design / Sizing Criteria Part 5-68	Reuse Facilities: **Item/Parameter/Description** | **Units** | **WwTP at Saulkere** Minimum UF Plant Recovery | % | 95	The maximum recovery achievable through UF systems is approximately 93-94%. Any additional recovery is possible only through the installation of extra UF backwash recovery systems that treat UF backwash waste and make it available for reuse. Since surplus flow is available at the inlet of the UF plant, we request that a minimum recovery of 93% be allowed for the UF plants. Kindly confirm	Refer Addendum-1
162	TSPS & WwTPs Design / Sizing Criteria Part 5-68	Reuse Facilities: **Item/Parameter/Description** | **Units** | **WwTP at Saulkere** Membrane Pore Size | - | 0.01 – 0.03 microns to remove suspended solids, bacteria and viruses	Ultrafiltration membranes typically have a porosity range between 0.01 and 0.07 microns, with 0.04 microns being the most commonly adopted nominal size in the industry. Therefore, we request that a nominal pore size of 0.04 microns for the UF membrane be allowed. Kindly confirm.	Refer Addendum-1
163	TSPS & WwTPs Design / Sizing Criteria Part 5-68 & 8.18.16 Ultra Filtration System (Submerged/ Pressurized) Part 8-111	Reuse Facilities: **Item/Parameter/Description** | **Units** | **WwTP at Saulkere** Membrane Material (MOC) | - | Poly-Vinyli-Dene-Fluoride (PVDF) reinforced with polyester or polypropylene backing layer. & **K. PVDF Membrane with Braided** The membrane fiber features a Braided PVDF membrane formulation cast on polyester support braid.	PVDF reinforced with polyester is not necessary for submerged ultrafiltration systems, which operate at lower pressures compared to pressurized UF systems. Therefore, we request permission to provide more advanced, 100% PVDF monolithic membranes for the submerged ultrafiltration system. These membranes offer the following advantages: Greater efficiency compared to braided PVDF membranes, as the PVDF layer tends to peel off during operation, reducing functionality. Longer membrane lifespan compared to braided PVDF. Higher reliability. Reduced chemical consumption compared to braided PVDF. Kindly confirm.	Refer Addendum-1
164	TSPS & WwTPs Design / Sizing Criteria Part 5-68	Reuse Facilities: **Item/Parameter/Description** | **Units** | **WwTP at Saulkere** Membrane Type | - | Submerged (out-to-in) or Pressurized (outside-in or inside-out) hollow fiber membranes, designed to handle peak plant flow conditions.	The tender specifies that the ultrafiltration system should be designed to handle peak plant flow conditions. However, as per the tender, the required UF feed pumps will pump water to the ultrafiltration system to generate 14 MLD of permeate flow for Saulkere Site. Therefore, we assume that peak plant flow conditions are not applicable for the design of the ultrafiltration system. Kindly confirm.	Refer Addendum-1
165	TSPS & WwTPs Design / Sizing Criteria Part 5-68	Reuse Facilities: **Item/Parameter/Description** | **Units** | **WwTP at Saulkere** Maximum Membrane Flux rate | - | 30 LMH	The maximum membrane flux specified in the tender, i.e., 30 LMH, is typically applicable for MBR systems that operate under high solids load (>5000 mg/L). For UF systems treating secondary treated wastewater, the solids load is usually below 20 mg/L. In such cases, a lower flux rate is unnecessary and could lead to a significant increase in capital costs without offering substantial benefits to the client. Therefore, we kindly request that the average membrane flux rate be allowed to be ≤ 40 LMH. Kindly Confirm.	Tender Conditions Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
166	TSPS & WwTPs Design / Sizing Criteria Part 5-69	Reuse Facilities: **Item/Parameter/Description** | **Units** | **WwTP at Saulkere** UF Membrane design load factor (on BOD and TSS) | - | 2	Please confirm that the load factor for UF membrane design refers to the design safety concerning the inlet parameters to the UF system. Additionally, since UF membranes are designed to remove suspended solids, we understand that the design safety or load factor of two shall apply only to the inlet TSS values for the UF system. Kindly confirm	Tender Conditions Prevails.
167	8.18.16 Ultra Filtration System (Submerged/ Pressurized) Part 8-107	**D. Working Principle of Submerged UF Process:** After mechanical pretreatment, the wastewater is fed to the membrane tanks where the water is separated from the solids by the SUF membranes. The liquid is typically fed below the submerged membrane modules.	We assume that the bidder is allowed to provide rotary drum screens as a mechanical pre-treatment for the submerged ultrafiltration process. Kindly confirm.	Tender Conditions Prevails. It is after Disc filtration system only.
168	8.18.16 Ultra Filtration System (Submerged/ Pressurized) Part 8-110	**I. Single Header Design** • The SUF product consists of bundles of hollow fiber membranes potted only at the lower end of each bundle. The non-potted ends of the fibers (at the top of the bundle) are individually sealed and move freely in the liquid.	The tender specifies that the submerged ultrafiltration system shall have a single header design. However, issues typically associated with double header designs, such as the presence of fibrous material and high MLSS, are not relevant in treated sewage. Double header designs are generally more efficient, providing uniform withdrawal of water from the modules. Therefore, we request approval for the bidder to offer the submerged ultrafiltration header design based on the UF manufacturer's recommendation/design. Kindly confirm.	Refer Addendum-1
169	8.18.16 Ultra Filtration System (Submerged/ Pressurized) Part 8-113	**Technical Particular** | **Parameters** **Spare Space for module per train** | | 10 %	We understand that for the submerged UF system, the term "train" shall be interpreted as "cell/tank," and a 10% spare space for modules shall be provided per "cell/tank:" Kindly confirm.	Refer Addendum-1
170	8.18.16 Ultra Filtration System (Submerged/ Pressurized) Part 8-113	**Technical Particular** | **Parameters** **Minimum Operating Life of Membrane** | Years | 10	The minimum operating life of membranes varies depending on several factors, including the type of system and vendor, and typically ranges from 5 years for pressurized ultrafiltration systems to 7 years for submerged ultrafiltration systems. Therefore, we request you to allow the bidder to propose a minimum operating life of membranes as 7 years. Kindly confirm	Tender Conditions Prevails.
171	Vol I, Pg. No. 14 of 236	**Particular Construction Experience (In the last Five (5) Financial Year's** a) (i) Contracts of Similar Size and Nature: The tenderer as sole entity or lead partner and or partner in a joint venture shall provide evidence that it has successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of One (1) No. WwTP contract of value not less than Rs.71.63 Crores in last Five (5) financial years	**Particular Construction Experience (In the last Five (5) Financial Year's** a) (i) Contracts of Similar Size and Nature: The tenderer as sole entity or lead partner and or partner in a joint venture shall provide evidence that it has successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works , Nos of . WwTP/STP under one work order /contract of value not less than Rs.71.63 Crores in last Five (5) financial years, we aslon understood that Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works , Nos of . WwTP /STP, constructed under one agreement an amounting to Rs not less than Rs.71.63 Crores in last Five (5) financial years, in this case bidder will qualify this criteria	Yes. Tender Conditions Prevails.

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<table>
<tr><th>Sr. No.</th><th>Vol.No. / Pg. No.</th><th>Description</th><th>Query</th><th>Reply</th></tr>
<tr><td>172</td><td>Vol I, Pg. No. 14 of 236</td><td>ii) Construction Experience- Reuse Plant (with Tertiary Level)

The tenderer as sole entity or lead partner and or partner in a joint venture shall provide evidence that it has successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of minimum One (1) No. and above reuse plant of 12 MLD or Two (2) Nos. of reuse plant (with Tertiary Treatment) of minimum 6 MLD capacity and should be in operation for a period of one year during the last 5 years as on date of Bid submission. The Reuse Plant (with Tertiary Treatment) have to meet following criteria for the treated effluent.</td><td>ii) Construction Experience- Reuse Plant (with Tertiary Level)

The tenderer as sole entity or lead partner and or partner in a joint venture shall provide evidence that it has successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of minimum One (1) No. and above reuse plant of 10.0 MLD or Two (2) Nos. of reuse plant (with Tertiary Treatment) of minimum 5 MLD capacity and should be in operation for a period of one year during the last 5 years as on date of Bid submission. The Reuse Plant (with Tertiary Treatment) have to meet following criteria for the treated effluent.</td><td>Tender Conditions Prevails.</td></tr>
<tr><td>173</td><td>Vol. I, Pg. 9</td><td><u>Hybrid Mode for Bommanahalli Zone in 110 Village</u> Areas (Phase-II) Under Karnataka Water Security and Disaster Resilience Program (KWSDRP)- (Contract Package No. BWSSB CE-P/KWSDRP/WBS-IV)</td><td>In the name of the work, the Hybrid Mode for Bommanahalli Zone in 110 Village is mentioned. Kindly elaborate the meaning of the Hybrid Mode.</td><td>Hybrid Mode Contract - Contract comprising Design Built & Operate (DBO) - Works A and Item Rate works - Works B</td></tr>
<tr><td>174</td><td>Vol. I, Pg. 14</td><td>The Tenderer as sole entity or lead partner and or partner in a joint venture shall provide evidence that it has successfully completed procurement, execution and commissioning of <u>Underground Sewerage network</u> for the Contract Value not less than Rs. 8 Crores in last Five (5) financial years.</td><td>Generally, the tenders are being called for the construction of Sewerage Network, STP/WWTP, SPS/WWSPS, rising main etc. in a single project, just like the present tender on the Lumpsum basis. Hence, we presume that the work of the underground sewerage network also includes the cost of construction of sewer network, STP/WWTP, SPS/WWSPS, rising mains, along with its associated work. Please confirm.</td><td>Tender Conditions Prevails</td></tr>
<tr><td>175</td><td>Vol. I, Pg. 14</td><td>The Tenderer as sole entity or lead partner and or partner in a joint venture shall provide evidence that it has successfully completed procurement, execution and commissioning of <u>Underground Sewerage network</u> for the Contract Value not less than Rs. 8 Crores in last Five (5) financial years.</td><td>Alternatively, it is requested to allow the bidder to execute a Collaboration Agreement/MoU with the agency meeting the said qualification criteria.
Please Confirm.</td><td>Not Acceptable. Tender Conditions Prevails.</td></tr>
<tr><td>176</td><td>Vol. I, Pg. 14</td><td>Construction Experience- Reuse Plant (with Tertiary Level)
……. The Reuse Plant (with Tertiary Treatment) have to meet following criteria for the treated effluent
<table>
<tr><th>Parameter</th><th>Unit</th><th>Specified Maximum Concentration</th></tr>
<tr><td>Turbidity</td><td>NTU</td><td>< 2.0</td></tr>
<tr><td>TDS</td><td>mg/L</td><td>< 1000</td></tr>
<tr><td>TN</td><td>mg/L</td><td>< 5.0</td></tr>
<tr><td>BOD</td><td>mg/L</td><td>< 5.0</td></tr>
<tr><td>COD</td><td>mg/L</td><td>< 30.0</td></tr>
<tr><td>TP</td><td>mg/L</td><td>< 1.0</td></tr>
<tr><td>Fecal Coliform</td><td>MPN/100 ml</td><td>Nil</td></tr>
</table></td><td>It is to highlight that Tertiary Treatment of the Wastewater / Sewage effluent has not been designed to treat the TDS and hence, the same will not be checked for WWTP/STP. Hence, please delete the requirement of the TDS from the list of parameters.
Further, the Total Nitrogen (TN) of the treated effluent will never be reduced up to 5 mg/L and we presume that the same is a typographical mistake. The corrected value must be Total Nitrogen (TN) < 10 mg/L and NH4N < 5 mg/L.
Furthermore, if the treated effluent has the BOD and COD contents, then the Fecal Coliform will never be Nil. Hence, need to revise.
In view of the above, it is requested to modify the said table as follows:
<table>
<tr><th>Parameter</th><th>Unit</th><th>Specified Maximum Concentration</th></tr>
<tr><td>Turbidity</td><td>NTU</td><td>< 2.0</td></tr>
<tr><td>TDS</td><td>mg/L</td><td>Not Applicable</td></tr>
<tr><td>TN</td><td>mg/L</td><td>< 10.0</td></tr>
<tr><td>BOD</td><td>mg/L</td><td>< 5.0</td></tr>
<tr><td>COD</td><td>mg/L</td><td>< 30.0</td></tr>
<tr><td>TP</td><td>mg/L</td><td>< 1.0</td></tr>
<tr><td>Fecal Coliform</td><td>MPN/100 ml</td><td>230</td></tr>
</table></td><td>Refer Addendum-1</td></tr>
</table>

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
177	Vol. I, Pg. 15	**Construction Experience- Pipeline** The bidder must have experience in the role of Prime Contractor (Single entity or JV member)/Management Contractor for procurement and construction of pipeline (**DWC/RCC/DI**) with a minimum diameter of **200 mm** & above in any One year during the last 5 years as on date of bid submission involving minimum **length of 12 Km**.	To have better competition, it is requested to please allow the bidder to have a collaboration/ MOU with the experienced nominated subcontractor/ agency in addition to the Joint Venture. Please confirm.	Not Acceptable. Tender Conditions Prevails.
178	Vol. I, Pg. 18	**Equipment Capabilities** Availability by owning at least 50% of the required specified Key and Critical equipment for the above work. The remaining 50% can be deployed on lease/hire basis for all works provided the relevant documents (Commitment, Agreement etc..) for the availability of the work are furnished.	To have better competition, it is requested to allow the bidder to have a hiring agreement for 100% of the equipment listed in the table. Please confirm.	Not Acceptable. Tender Conditions Prevails.
179	Vol. II Section 7	In table of 1.9 TREATED EFFLUENT QUALITY REQUIREMENTS FOR REUSE – Mentioned that Oil & Grease should be nil	Please Confirm Oil & Grease at the inlet.	The design influent parameters requirement shall be as defined Part 5, Volume 2/ Section 7, "TSPS & WwTPs Design / Sizing Criteria". Additionally, The tenderers are requested to make individual site visits for any other additional details and design accordingly.
180	Vol. II Section 7	**Pumping main to WwTP** Works downstream of Line XX shall be included in Works – A, whereas Works upstream of Line XX shall be included in Works – B. For clarity Works in Works – A therefore includes a short length of sewer, which is outside the boundary of the Site for Works – A, as described in the above paragraph.	It is understood that the scope of work A terminates 2 meters from the boundary line, from which point the scope of work B commences. Please Confirm.	The requirement shall be as defined in the tender document.
181	Vol. II Section 7	While selecting any type of pump and blower, priority shall be given to higher pump/blower efficiency and lower power consumption and shall ensure that pump/blower can operate at high efficiency throughout its service life. At minimum contractor shall ensure efficiencies of pump/blower as listed below: •Minimum efficiency of Submersible Pumps for ISPS and TSPS shall be 70% •Minimum efficiency of Axial Tubular Pump (MLR) shall be 70% • Minimum efficiency of RAS Pump (Horizontal/Vertical Non-clog solid handlin shall be 65%. • Minimum efficiency of Sludge Pump (Progressive Cavity/Screw pump) shall b 45%. •Minimum efficiency of Rotary Tri-Lobe blower shall be 70% •Minimum efficiency of Centrifugal Turbo blower shall be 90%	Please note that in Pumps & Blowers, efficiency is governed by the duty points themselves. Hence, it is requested to accept the pump & blower efficiency as proposed by the manufacturer in line with the desired duty points.	Refer Addendum-1
182	Vol. II Section 7	Location of outfall structure to discharge treated sewage shall be as directed by Engineer. However, contractor shall ensue that outfall structure shall be located nearest to the receiving water body and flow shall be discharged with cascade effect	Please confirm location & point of termination.	Disposal to the water body which is adjacent to WwTP.
183	Vol. II Section 7	All pumps shall have flooded suction and negative suction shall not be allowed in pump selection.	It is understood that all the pumps shall be proposed with positive suction with no priming needed. Please Confirm.	Tender Conditions Prevails
184	Vol. II Section 7	5.16.5. Plant Water System: A separate overhead tank shall be provided for the plant water system. A pressurized plant water booster system shall be provided, which shall operate based on the pressure set point on the plant water ring main to supply plant water to all of the selected applications through the pressurized plant water ring main.	It is understood that, in addition to the treated water storage, a separate overhead tank shall be provided for the plant water system, along with a booster pump system designed to maintain a minimum pressure of 4 bar in the plant water ring main. Kindly confirm the required booster pump flow rate.	Tender Conditions Prevails
185	Vol. II Section 7	Design of WWTP (Primary, secondary & reuse system)	We understand that the selection of the treatment process (MBBR, EASP, SBR), along with the sizing of process tanks and volume, design parameters (F/M, SRT, MLSS) shall be in accordance with the bidder's design philosophy in compliance with the CPHEEO Manual. Please Confirm.	Tender Conditions Prevail

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186	Vol. II Section 7	Minimum UF (Reuse Facility) Recovery : 95%	Recovery will depend on membrane selection. Please confirm.	Refer Addendum-1
187	Vol. II Section 7	Minimum poly dosing rate = 5 kg/T	Minimum Poly dosage rate shall be 1.5-2.0 kg/T as per the CPHEEO manual. Kindly confirm.	Tender Conditions Prevails.
188	IV/P-594 Vol. II, Section 7	**APPROVED VENDOR LIST** – FOR MECHANICAL EQUIPMENT Vendor List: - Inclusion of Make	The bidder has to operate & maintain the facilities for 10 years; it is requested to let the bidder select the make of equipment, considering its continuous performance for a longer period. This will help in selecting and providing reliable equipment that requires less maintenance during the O&M period	Tenderer can propose the alternate vendor satisfying the criteria defined in the Volume 2/Section 7, Part 8
189	General	Buildings constructed under contract	As the O&M period is 10 years, the buildings such as administrative buildings, workshop, etc. constructed under contract will be allowed for use of the contractor during the O&M period without any extra cost. Please confirm.	Not Allowed. Tender Conditions Prevail
190	General	Site office / Contractors' office provided during execution of contract	As the O&M period is 10 years, we request the site office, contractor's office, staff quarters, temporary sheds, etc. provided during construction will be used by the bidder during the O&M period without demolishing the same. Please confirm.	Not Allowed. Tender Conditions Prevail
191	General	Date of Submission	Looking to the volume of work involved in tender preparation, we request to extend the date of submission at least by 3-4 weeks after receipt of the reply to Prebid queries.	Tender Conditions prevails
192	14 of 236 Vol – I	**Particular Construction Experience** (a) (i) Contracts of Similar Size and Nature: The tenderer as sole entity or lead partner and or partner in a joint venture shall provide evidence that it has successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of **One (1) No. WwTP contract of value not less than Rs.71.63 Crores in last Five (5) financial years**.	We understand Wastewater Treatment Plant (WWTP) and Sewage Treatment Plant (STP) both are similar, Bidder who is under possession of STP experience shall also be considered a qualified. Also allow the said experience **in last Ten (10) Financial years to encourage wider participation and foster a more competitive bidding process.** Please confirm.	For experience purpose this certificates for both Wastewater Treatment Plant (WwTP) and Sewage Treatment Plant (STP) shall be considered. Not acceptable. Tender Conditions Prevails.
193	14 of 236 Vol – I	(b)Experience in Key Activities: During the last 5 years as on date of Bid submission	Kindly allow the said experience **in last Ten (10) Financial years to encourage wider participation and foster a more competitive bidding process.** Please confirm	Not Acceptable. Tender Conditions Prevails.
194	14 of 236 Vol – I	Tenderer must submit the MOU with Technology provider for proposed process technology (SBR/IFAS/MBBR) under this contract, failing which the Tender will be considered as technically non-responsive.	We understand **Bidder who have sufficient experience of Design, supply, installation and commissioning of Sewage treatment Plant on offered technology and has successfully installed same capacity** and plant is under operation & Maintenance. **In that case Bidder doesn't require to make MOU for the offered technology**. Please confirm	Refer Addendum-1
195	14 of 236 Vol – I	(ii) Construction Experience- Reuse Plant (with Tertiary Level) Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of 1 no. 12 MLD & 2 nos. 6 MLD reuse plant (with Tertiary Treatment) with **one year O&M in last 5 Years.**	We understand the said requirement significantly **limits the competition and may restrict participation of otherwise technically qualified and experienced agencies.** We kindly request the **deletion of this clause or its relaxation to encourage wider participation and foster a more competitive bidding process.** We are confident that agencies with substantial relevant experience in similar infrastructure and treatment facilities can ensure project success even if their past projects do not exactly match the stated capacity and configuration. Please confirm	Not Acceptable. Tender Conditions Prevails.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
196	17 of 236 Vol – I	(d) The tenderer who have applied for corporate debt restructuring (CDR)/ strategic debt restructuring (SDR)/ facing recovery proceeding from Financial Institution/ facing winding up proceedings / those under BIFR in the last 5 Financial Years (i.e.,2019-20 to 2023-24). In this regard, the Tenderer shall submit along with tender, an affidavit along with certificate of statutory Auditor that the Tenderer is not under CDR/SDR/ not facing recovery proceeding from Financial Institutions / not facing winding up proceedings / not under BIFR need to be submitted by the tenderer.	We would like to bring to your kind notice that CDR/SDR provision are no more relevant as the same repealed vide RBI notification no. RBI/2017-18/131, DBR.No.BP.BC.101/21.04.048/2017-18 dated 12th Feb 2028. Notification is attached herewith. We understand bidder can submit the affidavit for the same with RBI notice. Please confirm	Not Acceptable. Tender Conditions Prevails.
197	18 of 236 Vol – I	3.1.5 Equipment Capabilities Sl.No. | Equipment Type and Characteristics | Minimum Number Required (Nos.) 1 | Crane or Hydra (10 Ton) | 4 2 | Loader cum back hoe (0.7 Cum) | 4 3 | Excavators (1.0 Cum) | 4 4 | Tipper/Dumper Trucks (10 Cum) | 4 5 | Road Cutting Machine | 2 6 | Compressor | 1 Availability by owning at least 50% of the required specified Key and Critical equipment for the above work. The remaining 50% can be deployed on lease/hire basis for all works	We request kindly consider a relaxation in the requirement to provide **RC book copies for leased/hired vehicles** at the time of bid submission. **Suggestion/Request for Amendment:** It is requested that the submission of **RC book copies for leased/hired vehicles be allowed at the time of award or prior to mobilization**, instead of at the bid stage. Alternatively, a **declaration from the vehicle owner** should be deemed sufficient during the bidding process.	Declaration from the vehicle owner for the leased / hired vehicles will be considered for bidding process only. However, the tenderer has to submit all the copies pertaining to leased/ hired vehicle before award of contract. Tender Conditions Prevails.
198		Biomedia-Virginmedia-Extuded	Agreed	Tender Conditions Prevails.
199		Media shape- Cylindrical with internal fins	Agreed	Tender Conditions Prevails.
200		Media Life-(Min) 20 years	Agreed	Tender Conditions Prevails.
201		Solid Loading Rate-Max 45 g/m2	Request to amend for Max 25g/m2	Tender Conditions Prevails.
202		Maximum effective surface Area500m2/m3	Agreed. However request to consider higher surface area like 600-650 also	Tender Conditions Prevails.
203		Tenderer must submit MOU with MBBR technology provider under this contract	Request to abolish the clause for MBBR technology	Tender Conditions Prevails.
204		Total HRT-18Hrs	It should be based on process design.	Tender Conditions Prevails.
205		Technology provider shall provide the evidence that he has successfully supplied the technology for at least 52MLD-1 nos or 26MLD-2nos with MBBR technology and should be in successful operation for a period of one year as per section 3.1.2(b) (i) Experience in Execution of STPs.	Cooldeck as a leading manufacturer in India and prestigious supplier to major client like Triveni/ Ion exchange/ Therma x/ L&T/ RoChem/. We have more than 2000 reference for MBBR media supply to Municipal and other major industry. Presently we do not have reference for the successful operation for a period of one year. Request you to waive off the section 3.1.2 (b) (i) for technology provider to support the Make in India manufacturer.	Not Acceptable. Tender Conditions Prevails.
206	Vol II, 5.19.1 for Works-A	pH - 6.5-7.5 BOD- 350 mg/l COD-800 mg/l TSS-450 mg/l VSS-360 mg/l TKN-70 mg/l NH4-N- 45 mg/l Total Phosphorous- 7 mg/l	The influent parameters which are mentioned are not as per CPHEEO. Pl confirm the values that to be considered for design for individual STP.	Tender Conditions Prevails.
207	Vol II, 1.3 Components List for Works-A,		Is the provision of a Disc Cloth Filter, Ultrafiltration (UF) system, and Odour Control Unit mandatory for every individual STP?	Tender Conditions Prevails. The requirement of a Disc Filter, Ultrafiltration (UF) system, and Odour Control Unit for respective WwTPs shall be as defined in the tender document.

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Response to Pre-Bid Queries

NAME OF PROJECT : DESIGN, ENGINEERING, CONSTRUCTION AND COMMISSIONING OF WASTEWATER TREATMENT PLANTS WITH TERTIARY TREATMENT FACILITY, AND INTERMEDIATE SEWAGE PUMPING STATION ALONG WITH OPERATION & MAINTENANCE THEREOF FOR TEN YEARS [WORKS - A] AND PROCUREMENT AND CONSTRUCTION OF RISING MAIN, MAIN SEWERS AND LATERALS INCLUDING MACHINE HOLES AND LIFT SEWAGE PUMPING STATIONS [WORKS – B] HYBRID MODE FOR BOMMANAHALLI ZONE IN 110 VILLAGE AREAS (Phase II) UNDER KARNATAKA WATER SECURITY AND DISASTER RESILIENCE PROGRAM (KWSDRP) – (Contract Package No. BWSSB CE-P/KWSDRP/WBS-IV)

Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
208	Vol II, 1.3 Components List for Works-A,	EA Process, or IFAS Process, or MBBR Process, or SBR Process, incorporating biological nitrification, de-nitrification, and phosphorus removal. All these process options shall be followed by Disc filters, Chlorine Disinfection and Mechanical Sludge Dewatering. As defined.	UF system is not mentioned here. Pls confirm the scope of UF.	Tender Conditions Prevails. Yes confirmed UF Treatment system is already mentioned in this Tender package. Tender Conditions Prevails.
209	Vol II, 5.14.6 Tanker Filling Station	Contractor shall provide the facilities for tanker filling by installing dedicated "treated water transfer pumps" as specified in Paragraph 5.19.	Is Tanker Filling Station required at every STP?	Tender Conditions Prevails. Tanker filling station is required for each WwTP.
210		Further the WwTP locations (refer Paragraph 5.19.) where the reuse facilities are not specified, then a dedicated ultrafiltration unit with disinfection facilities shall be installed for the tanker filling station of the WwTP (Capacity shall be same as treated water transfer pumps) to ensure the treated water meets all the time stringent re-use standards and non-detectable fecal coliform levels before being loaded into the tankers. For capacity of treated water transfer pumps refer Paragraph 5.19.	We presume that UF treated water would be used in Filling Stations.	Tender Conditions Prevails. The requirement shall be as defined in the Tender document.
211	Vol II, 8.38 Approved Vendor/Manufacturer/Make List-Mechanical Equipment S.no. 10 for Works-A		Kindly allow Sub Surface Submersible mixers make Euroteck for Anaerobic &Anoxic tanks for easy Operation & Maintenance. Please Confirm for Individual STP	Not Acceptable, Tender Condition Prevail.
212	Vol II, 8.38 Approved Vendor/Manufacturer/Make List-Mechanical Equipment S.no. 12 for Works-A		Kindly allow Sub Surface Submersible mixers make Euroteck for Anaerobic &Anoxic tanks for easy Operation & Maintenance. Please Confirm for Individual STP	Not Acceptable, Tender Condition Prevail.
213	Vol II, 8.38 Approved Vendor/Manufacturer/Make List-Mechanical Equipment S.no. 22 for Works-A		Kindly include EKOTON make for the Fine Bubble (LDPE) Diffusers in the approved make list. Please Confirm for individual STP.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
214	Vol II, 8.38 Approved Vendor/Manufacturer/Make List-Mechanical Equipment S.no. 24 for Works-A		Kindly include Euroteck/EKOTON make for the Mechanical screens (bar type) in the approved make list. Please confirm for individual STP.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
215	Vol II, 8.38 Approved Vendor/Manufacturer/Make List-Mechanical Equipment S.no. 26 for Works-A		Kindly include Euroteck/EKOTON make for the Mechanical screens (bar type) in the approved make list. Please confirm for individual STP.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
216	Vol II, 8.38 Approved Vendor/Manufacturer/Make List-Mechanical Equipment S.no. 40 for Works-A		Kindly include Euroteck/MITA make for the Disc Filters in the approved make list. Please Confirm for individual STP.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
217	Vol II, 8.38 Approved Vendor/Manufacturer/Make List-Mechanical Equipment S.no. 5 for Works-A		Kindly include Screw Press/ Belt Filter Press for Dewatering of sludge Euroteck/Ekoton Make which consumes less power. Please Confirm for Individual STP	Not Acceptable, Tender Conditions Prevails.
218	General		Kindly include Sub Surface Aerators in Aeration Zone. Aerators are much more energy efficient and Operation & Maintenance is easy compared to Diffused Aeration. Please Confirm. Further we request to add AIRE-O2 make for the Sub Surface Aerators in the approved make under Approved make list Sub Surface Aerator as an additional item.	Tubular type Air Diffuser system is only allowed, other type of Diffuser for Aeration zone is Not Acceptable, Tender Conditions Prevails.
219	General		Kindly include Integrity Municipal Systems (IMS)- I-Box® Make for Odor control Unit. Please confirm for individual STP.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
220	General		Request you to include helical hybrid blowers which are energy efficient and high speed blower very well suited in the aeration	Tender Conditions Prevails.

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<table>
<tr><th>Sr. No.</th><th>Vol.No. / Pg. No.</th><th>Description</th><th>Query</th><th>Reply</th></tr>
<tr><td>221</td><td></td><td></td><td>Request to add Helical Hybrid Blowers in addition to Turbo Blowers & conventional Tri /Twin Lobe Blowers for all ongoing 9 projects of BWSSB KWSDRP WBS I to WBS V</td><td>Tender Conditions Prevails.</td></tr>
<tr><td>222</td><td></td><td></td><td>Inclusion of Advanced Air Blower Technology
We request that Positive Displacement Rotary Helical Hybrid Air Blowers be considered in addition to the currently listed blower types (Twin Lobe/Tri Lobe/Turbo). This technology is highly efficient, sustainable, and particularly suited to Indian operating environments. It is a proven, 100% make-in-India solution, designed to handle variable flow and pressure conditions efficiently.</td><td>Tender Conditions Prevails.</td></tr>
<tr><td>223</td><td></td><td></td><td>Inclusion of free floating IFAS carriers with PU Foam and activated carbon
We propose the use of PU foam-based IFAS carriers impregnated with activated carbon for STP upgradation. Below are technical specifications:

<table>
<tr><th>Items</th><th>Unit</th><th>Values</th></tr>
<tr><td>MOC</td><td></td><td>Poly Urethane Fom impregnated with activated carbon.</td></tr>
<tr><td>Medai Surface Area</td><td>M3/m²</td><td>More than 20000 m² /m³ (BET measurement)</td></tr>
<tr><td>Media filling ratio</td><td>%</td><td>12-15% of the total volume of IFAS reactor</td></tr>
<tr><td>Shape</td><td></td><td>Cuboid</td></tr>
<tr><td>Size</td><td></td><td>20x20x7mm</td></tr>
<tr><td>Media life</td><td></td><td>Minimum 10years</td></tr>
</table></td><td>Not Acceptable. Tender Conditions Prevails.</td></tr>
</table>

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